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October 1995

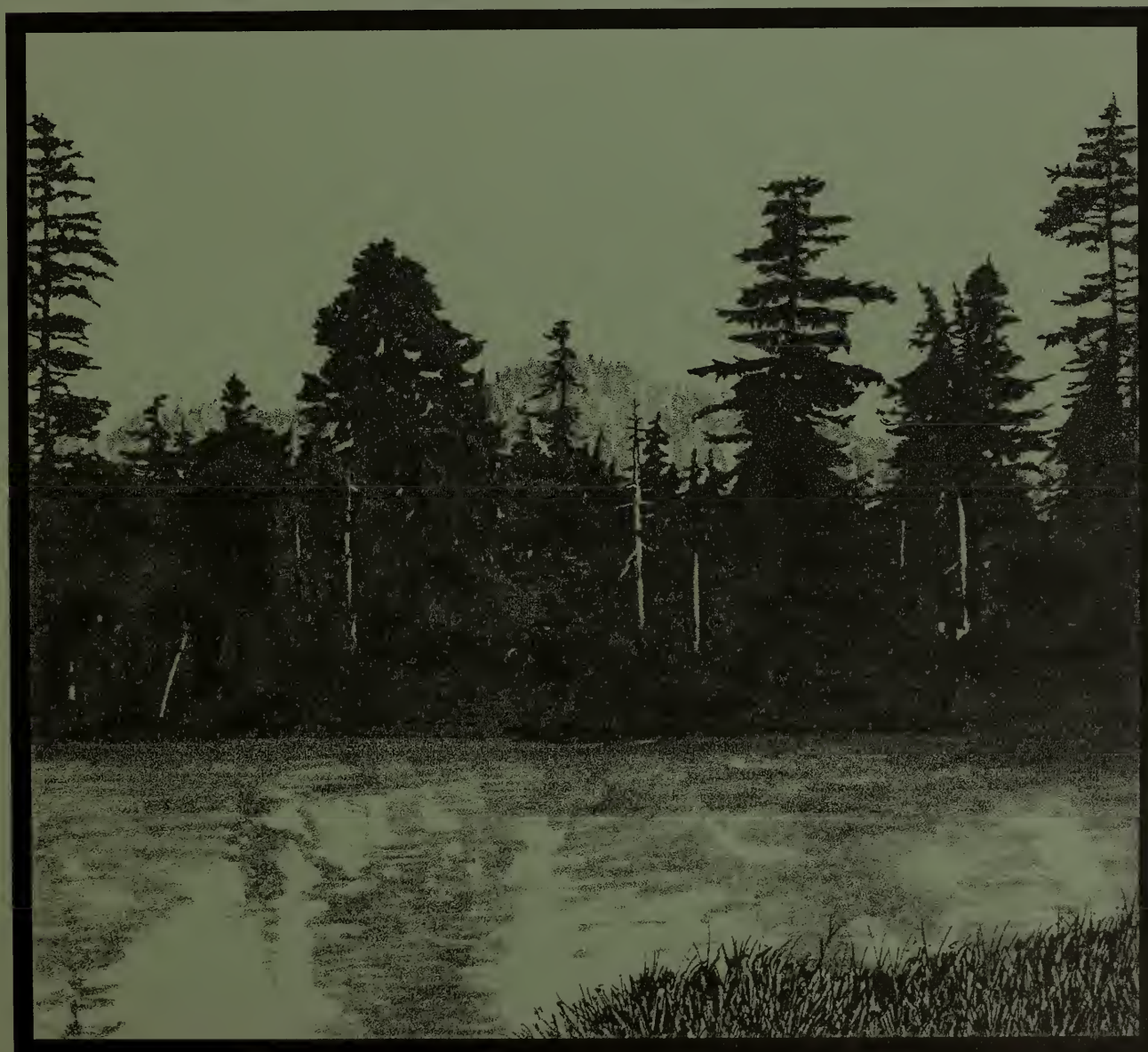


Control Lake Timber Sale

Draft Environmental Impact Statement

Volume III

Appendix F—Unit Design Cards



**Foster Wheeler Environmental Corporation
10900 NE 8th Street
Bellevue, Washington 98004
Contract No. 53-0109-3-00369
Control Lake Environmental Impact Statement**



Appendix F

Unit Design Cards

UNIT DESIGN CARDS

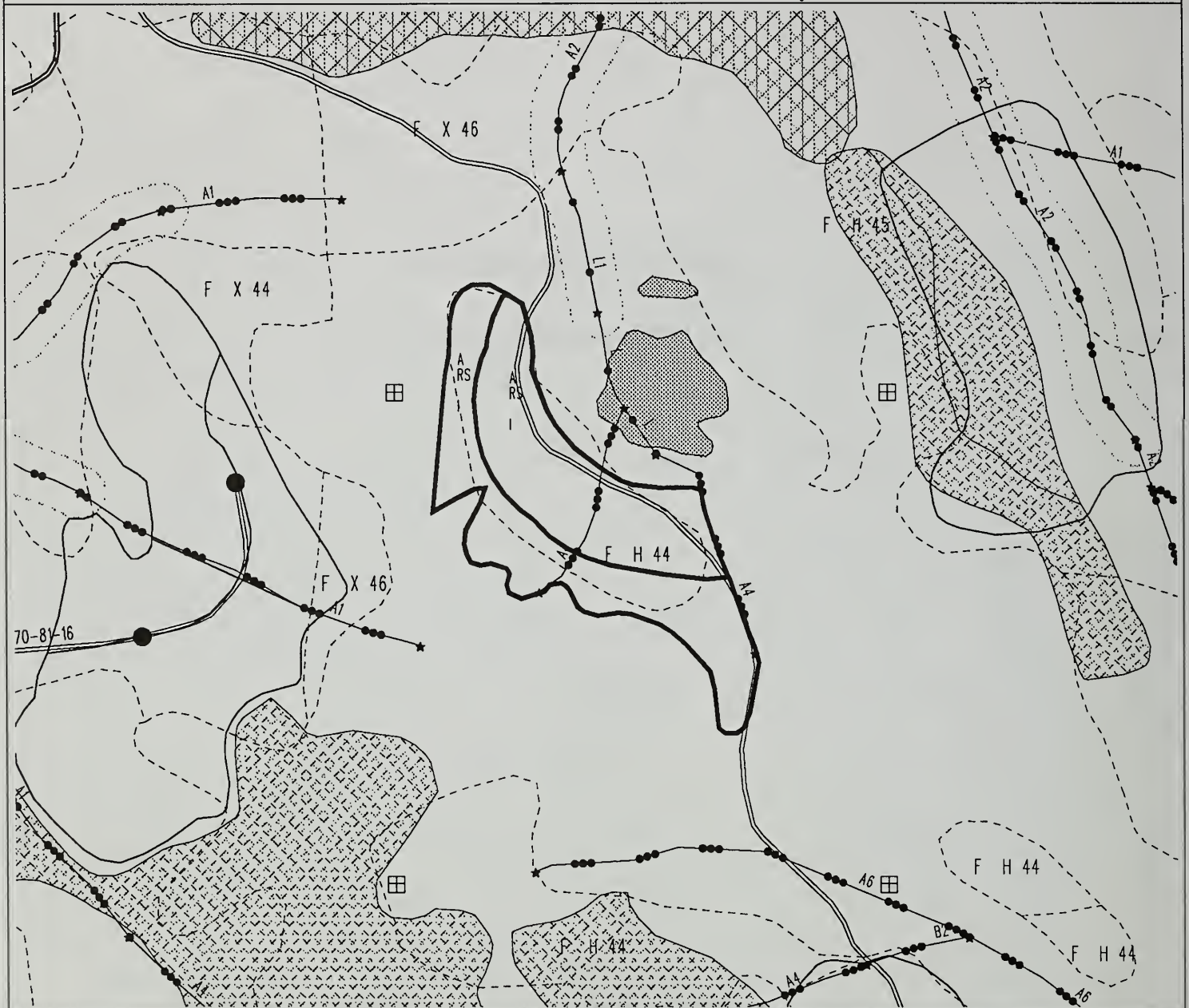
CONTROL LAKE EIS

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

VCU : 574

UNIT : 401

QUAD : D3-SW



- Revised Control Lake Project Boundary
- Post-Field Unit Boundary w/ Setting Codes
- Other Post-Field Unit Boundaries
- USFS Timber Types for Volc 4-7
- Eagle Tree Buffer of 330ft
- Existing & Rebuilt Roads
- F.S. Roads Under Construction
- Post-Field Proposed Roads
- Ahmu-Class 1 & Stream Chantypes
- Ahmu-Class 2 & Stream Chantypes
- Ahmu-Class 3 & Stream Chantypes
- Channel Type Change

- Lakes and Ponds
- Second Growth Units
- MMI 4
- McGilvery > 41
- Landings
- Stream & Lake NoCUT Buffers

May 13, 1994

.5 MILE

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

| | | | |
|--|---|---|-------------------------|
| VCU #: 574 | UNIT #: 401 | QUARTER QUAD: D3SW | PHOTO YR/#: 1991/990-44 |
| ACRES: 21/3 | VOL.: 97.5 MBF | LOGGING SYSTEM: Swingyarder/Running Skyline | |
| LANDSCAPE ZONE: Unit is within the Honker Divide watershed. | | | |
| Timber/Vegetation | Field Review: S. Karstens, 7/9/93 | Office Review: J. Goering | |
| Species composition predominantly hemlock and cedar with a few spruce and lodgepole present. Predominately hemlock regeneration. Low volume, mixed-species stand with <50% canopy closure and low site productivity. Muskeg inclusions incorporated with mixed species and very low volume timber in most areas, especially in south end of unit. Alaska yellow-cedar decline evident. Regeneration concerns due to low site index soils. Relatively thin, poorly drained soil. Windthrow damage evident throughout the unit, rock bluffs and outcrops on the higher elevations. Promote cedar regeneration through planting. | | | |
| Logging/Transportation | Field Review: E. Dewilde/G. Slawson, 7/09/93 | Office Review: M. Whitty | |
| Unit is accessed by Road #70-81-25. Recommended logging system is a swing yarder with running skyline, 95 % downhill yarding. Partial suspension is available, although not required. Maximum yarding distance is 400 feet. Partial cutting is feasible. Unit rates poor economically. Unit has good recreational opportunities. | | | |
| Watershed/Fisheries | Field Review: S. Tanguay/J. Metzler, 7/07/93 | Office Review: T. Stewart | |
| The lake adjacent to unit requires 100' no-cut buffer and should have a select cut in the next 500' due to lack of trees. Keep unit boundary to the base of the productive forest above the lake. Two Class III streams run through or along boundary of unit and require split yarding and directional falling. | | | |
| Soils/Geology | Field Review: S. Tanguay/J. Metzler, 7/07/93 | Office Review: T. Stewart | |
| No instability evident. Muskegs adjacent to unit. <u>Geology/Karst (D. Herron/R. Horrocks, 8/23/93):</u> Two significant active caves and some well developed karst were located just north of the unit boundary. No limestone or karst was found within unit as originally laid out. Recommend unit is not expanded to the north. Limestone outcrop forms east-facing slope of ridge. Estimate that this limestone unit underlies ridge and dips westward under the ridge to the west. Stream in unit enters and exits two separate caves. There is about 20' of underground passage before plunging. Second cave is totally underwater. Sinkholes and grikes on slopes on both sides of stream. Limestone appears by adjacent Karstic terrain. to be just outside of unit boundaries; non-limestone rock exposed in unit. Karst is downslope of unit. Unit is not affected | | | |
| Wildlife | Field Review: S. Tanguay, 7/07/93 | Office Review: C. Confer | |
| High woodpecker and Canadian goose activity. Geese observed in the lake (east of unit); Sandhill cranes above the lake in the large muskeg. Bear and deer sign/use evident. Large, currently unharvested area. Level 2 structure retention along east boundary to maintain goose, sandhill crane habitat. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross/M. Greenig | |
| Not seen from any priority travel route or use areas. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |

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|--|--|
| Interdisciplinary Team Recommendations | |
|--|--|

Group selection harvest (Type I) taking mistletoed trees where possible. Split-yard or fully suspend over Class III streams. Evaluate potential for disturbance and restrict harvest activities during time periods when Vancouver Canada goose or sandhill crane nesting might be disturbed. Even though all limestone/karst features occur outside of unit, significance of karst resources should be reviewed during final layout to determine need for the development of site-specific protective measures inside the unit. Mitigation measures for this unit are as follows: F5, F6, F8, F10, M2, R4, W2, and W11.

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NO UNIT MAP

UNIT DROPPED OR DEFERRED

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

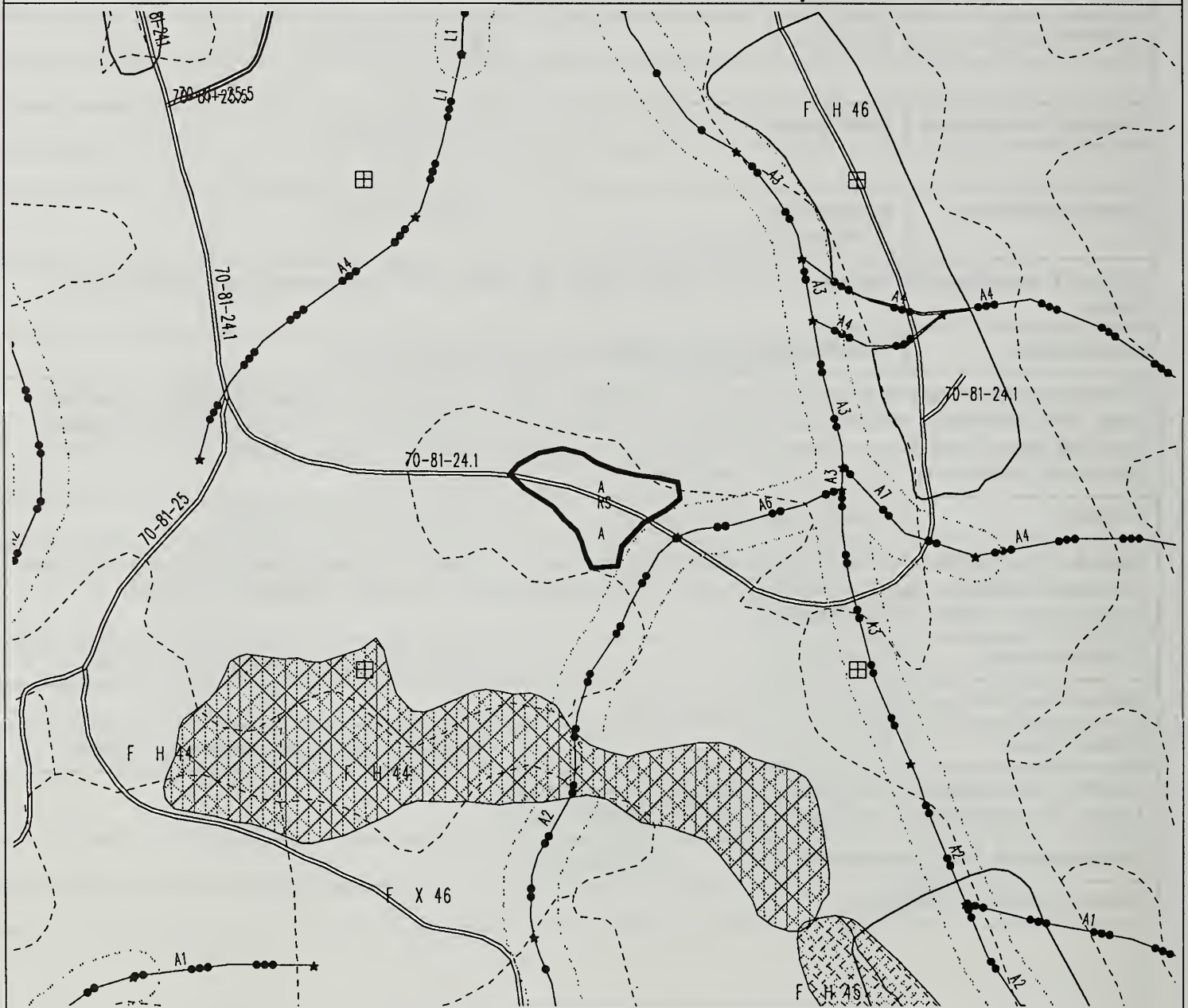
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|---|---|---|-------------------------|
| VCU #: 574 | UNIT #: 402 | QUARTER QUAD: | PHOTO YR/#: 1991/990-44 |
| ACRES: | VOL.: | LOGGING SYSTEM: | |
| LANDSCAPE ZONE: | | | |
| Timber/Vegetation | Field Review: | Office Review: | |
| | | | |
| Logging/Transportation | Field Review: | Office Review: | |
| | | | |
| Watershed/Fisheries | Field Review: G. Jackson/D. Crowe, 7/15/93 | Office Review: | |
| A Class II stream runs through eastern point of unit, requires 100' buffer, 100' added due to highly unstable, steep banks. | | | |
| Soils/Geology | Field Review: G. Jackson/D. Crowe | Office Review: | |
| This unit consists of extremely steep side slopes in a headwater valley, which has convergent topography. Numerous seeps, McGilvery soils from mid-slope on either side of the valley down to the stream. Old landslide scars indicate a particular susceptibility to mass wasting. Recommend dropping unit or helicopter logging. Buffer on east side of the stream may make harvest of that section uneconomical. | | | |
| Wildlife | Field Review: D. Crowe | Office Review: C. Confer | |
| High deer use, riparian corridor with high salmonberry and bear scat. Steep slopes lead down into stream on both sides - recommend helicopter logging or full suspension. Large previously unharvested area. High level of natural fragmentation. Level 1 structure retention. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit not seen from any priority travel route or use area. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | Reviewed By: | |
| Unit dropped due to MMI4 soils. | | | |

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

VCU : 574

UNIT : 403

QUAD. : D3-SW



- Revised Control Lake Project Boundary
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- USFS Timber Types for Volc 4-7
- Eagle Tree Buffer of 330ft
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- Ahmu-Class 2 & Stream Chantypes
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- MMI 4
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May 13, 1994

.5 MILE

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

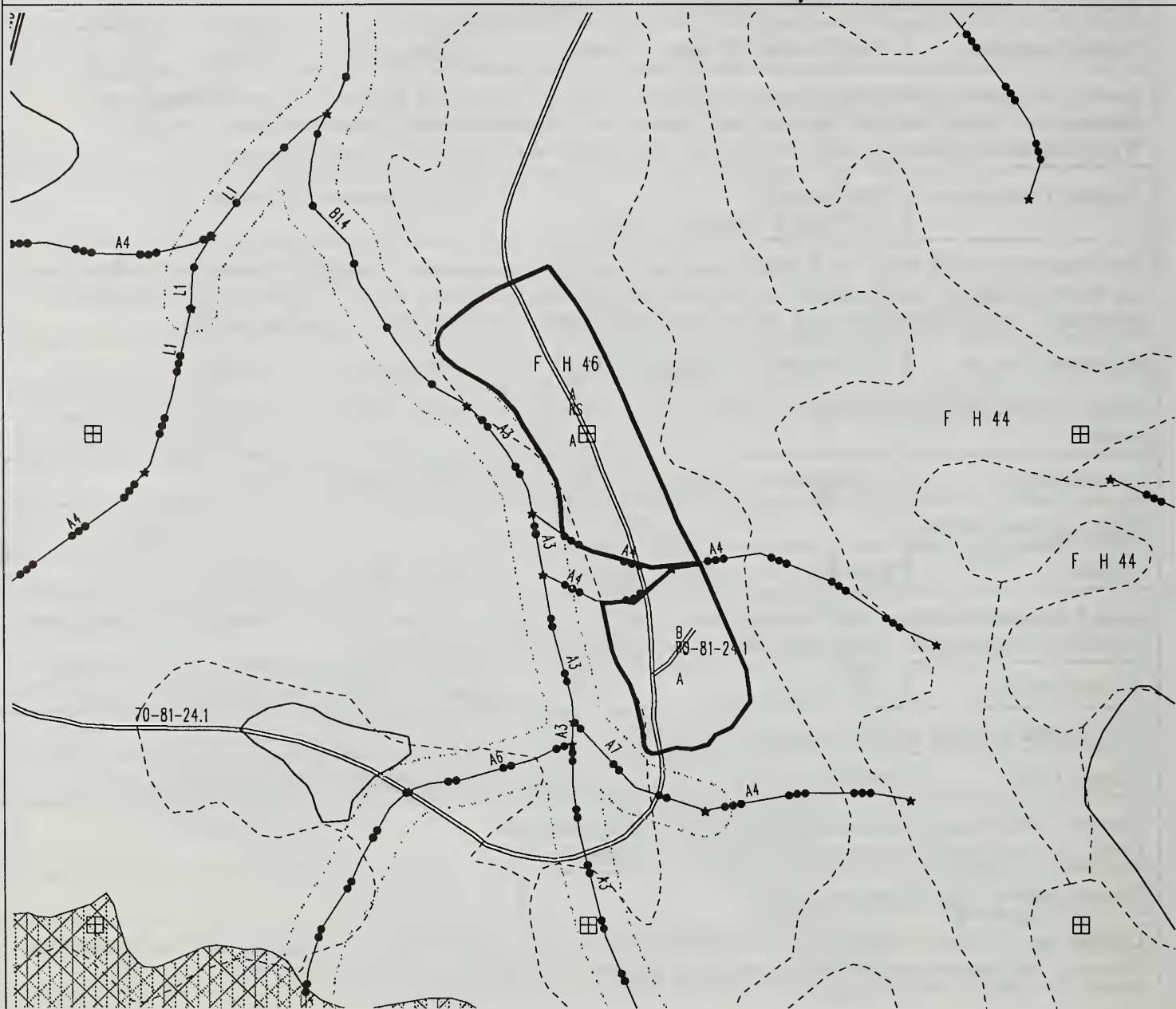
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|--|---|---|-------------------------|
| VCU #: 574 | UNIT #: 403 | QUARTER QUAD: D3SW | PHOTO YR/#: 1991/990-45 |
| ACRES: 3.8 | VOL.: 98.3 MBF | LOGGING SYSTEM: Shovel, Swingyarder/Running Skyline | |
| LANDSCAPE ZONE: Unit is within the Honker Divide watershed. | | | |
| Timber/Vegetation | Field Review: G. Hedin, 7/14/93 | Office Review: J. Goering | |
| Species composition predominantly hemlock with some cedar. Few spruce are present. Predominantly hemlock regeneration. Rocky, relatively thin soils and exposed rock. Numerous muskegs are located around the unit. Windthrow damage present in small area of unit. Rock bluffs on the higher elevations of the unit. | | | |
| Logging/Transportation | Field Review: M. Whitty/J. Herzberg, 7-19-93 | Office Review: E. Urstadt | |
| Unit is accessed by Rd #70-81-24.1 which can be used for a continuous roadside landing. The west and northeast areas can be shovel logged. A swingyarder can log the rest of the unit to a landing at 84-70. Twisters may be needed for guystumps. Paper plan boundary was moved north 300' to 400' to base of bluffs. Economics are fair. | | | |
| Watershed/Fisheries | Field Review: S. Tanguay, 7/12/93 | Office Review: T. Stewart | |
| Stream 1 drains into upper lake and is potentially Class II throughout. Keep boundary on northwest of bluffs along stream. | | | |
| Soils/Geology | Field Review: S. Tanguay, 7/12/93 | Office Review: T. Stewart | |
| Keep unit below bluffs. | | | |
| Wildlife | Field Review: H. Sloan, 7/01/93 | Office Review: C. Confer | |
| Level I structure retention. Dawn murrelet survey conducted 7/13/93. Occupancy behavior detected. Goshawk survey conducted - no detections. Large unharvested area with high natural fragmentation. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit not seen from any priority travel route or use area. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Original unit boundary modified due to rock bluffs/McGilvery soils. Type A clearcut. Maintain 100' buffer along Class II stream. Mitigation measures for this unit are as follows: F1, F5, F6, F8, F10, and W5. | | | |

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

VCU : 574

UNIT : 404

QUAD : D3-SW



- Revised Control Lake Project Boundary
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- Other Post-Field Unit Boundaries
- USFS Timber Types for Volc 4-7
- Eagle Tree Buffer of 330ft
- Existing & Rebuilt Roads
- F.S. Roads Under Construction
- Post-Field Proposed Roads
- Ahmu-Class 1 & Stream Chantypes
- Ahmu-Class 2 & Stream Chantypes
- Ahmu-Class 3 & Stream Chantypes
- Channel Type Change

- Lakes and Ponds
- Second Growth Units
- MMI 4
- McGilvery > 41
- Landings
- Stream & Lake NoCUT Buffers

May 13, 1994

.5 MILE

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

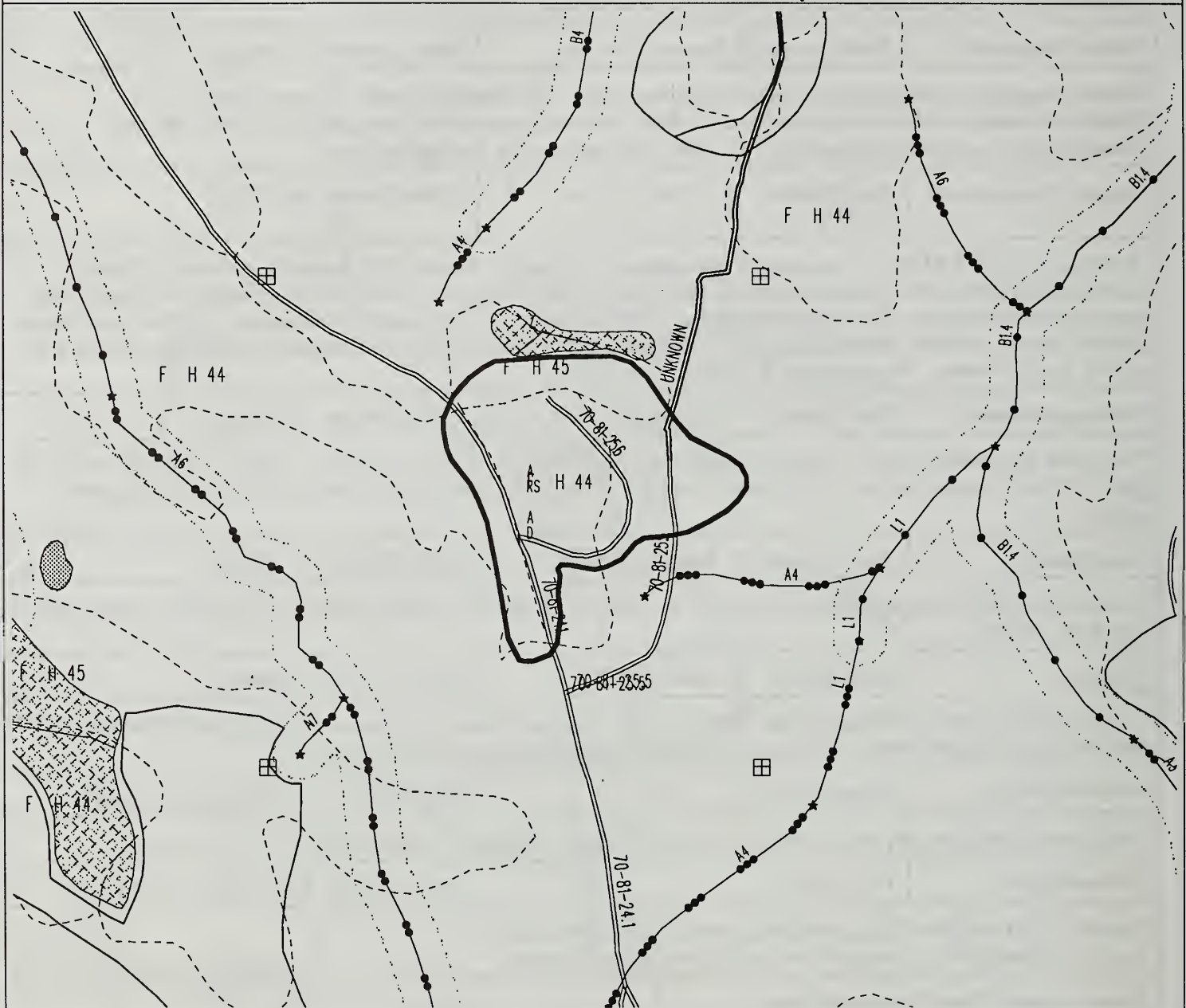
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| VCU #: 574 | UNIT #: 404 | QUARTER QUAD: D3SW | PHOTO YR/#: 1991/990-44 |
| ACRES: 19.7 | VOL.: 887.5 MBF | LOGGING SYSTEM: Swingyarder/Running skyline | |
| LANDSCAPE ZONE: Unit is within Honker Divide watershed. | | | |
| Timber/Vegetation | Field Review: B. Hasebe, 7/19/93 | Office Review: J. Goering | |
| Species composition predominantly hemlock with some cedar. Predominantly hemlock regeneration. Windthrow damage evident throughout the unit. Rock bluffs and outcrops on the higher elevations of the unit. Some thin soil, poor soil drainage areas. Promote cedar regeneration through planting. | | | |
| Logging/Transportation | Field Review: M. Whitty/C. Giles, 7/28/93 | Office Review: M. Whitty | |
| Accessed by Rd #70-81-24.1. Recommend swingyarder with running skyline, 75% downhill, maximum distance is approximately 500'. Partial suspension not required, not available in much of unit. North boundary and stream buffer have blowdown potential. Recommend feathering north boundary. Unit has scattered blowdown. One split yard stream divides into two channels which isolates timber. One channel should lose its O/W designation to facilitate yarding a 50' to 100' strip of timber. Fair economic feasibility. | | | |
| Watershed/Fisheries | Field Review: S. Tanguay, 7/12/93 | Office Review: T. Stewart | |
| Two Class III channels in unit. Stream 2 should have windfirm buffer for 50' at slopes > 50%, leaving all trees ≤ 15" dbh. Stream 3 requires at least a 100' buffer. Recommed 100 ft. extra along south portion of unit to buffer beaver ponds. | | | |
| Soils/Geology | Field Review: S. Tanguay, 7/12/93 | Office Review: T. Stewart | |
| Soils around bluffs in original unit and Stream 2 are unstable. Keep unit boundary below bluffs and see recommendation above for Stream 2. | | | |
| Wildlife | Field Review: H. Sloan, 7/12/93 | Office Review: C. Confer | |
| Level I structure retained through stream buffers. Large, previously unharvested area, with high level of natural fragmentation. Isolated timber between two Class III stream channels becomes leave island. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit is not visible from any priority travel routes or use areas. Maximum Modification VQO. No concerns. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| The northeast portion of original unit was deleted because of bluffs making area above them inaccessible to cable yarding. Recommend Type A and D clearcut. Keep 50' selective cut buffer on upper, steeper reaches of Stream 2. Maintain 100' buffer along stream on western boundary. Expand buffer to 150' to 200' in width in south part of unit near beaver ponds (expanded width prescriptive buffer not flagged in field). Final layout should re-evaluate split-yard requirements for both channels of Stream 2 to confirm this prescription. Mitigation measures for this unit are as follows: F1, F5, F6, F8, F10, and W5. | | | |

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

VCU : 574

UNIT : 405

QUAD : D3-SW



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- USFS Timber Types for Volc 4-7
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- F.S. Roads Under Construction
- Post-Field Proposed Roads
- Ahmu-Class 1 & Stream Chantypes
- Ahmu-Class 2 & Stream Chantypes
- Ahmu-Class 3 & Stream Chantypes
- Channel Type Change

- Lakes and Ponds
- Second Growth Units
- MMI 4
- McGilvery > 41
- Landings
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May 13, 1994

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

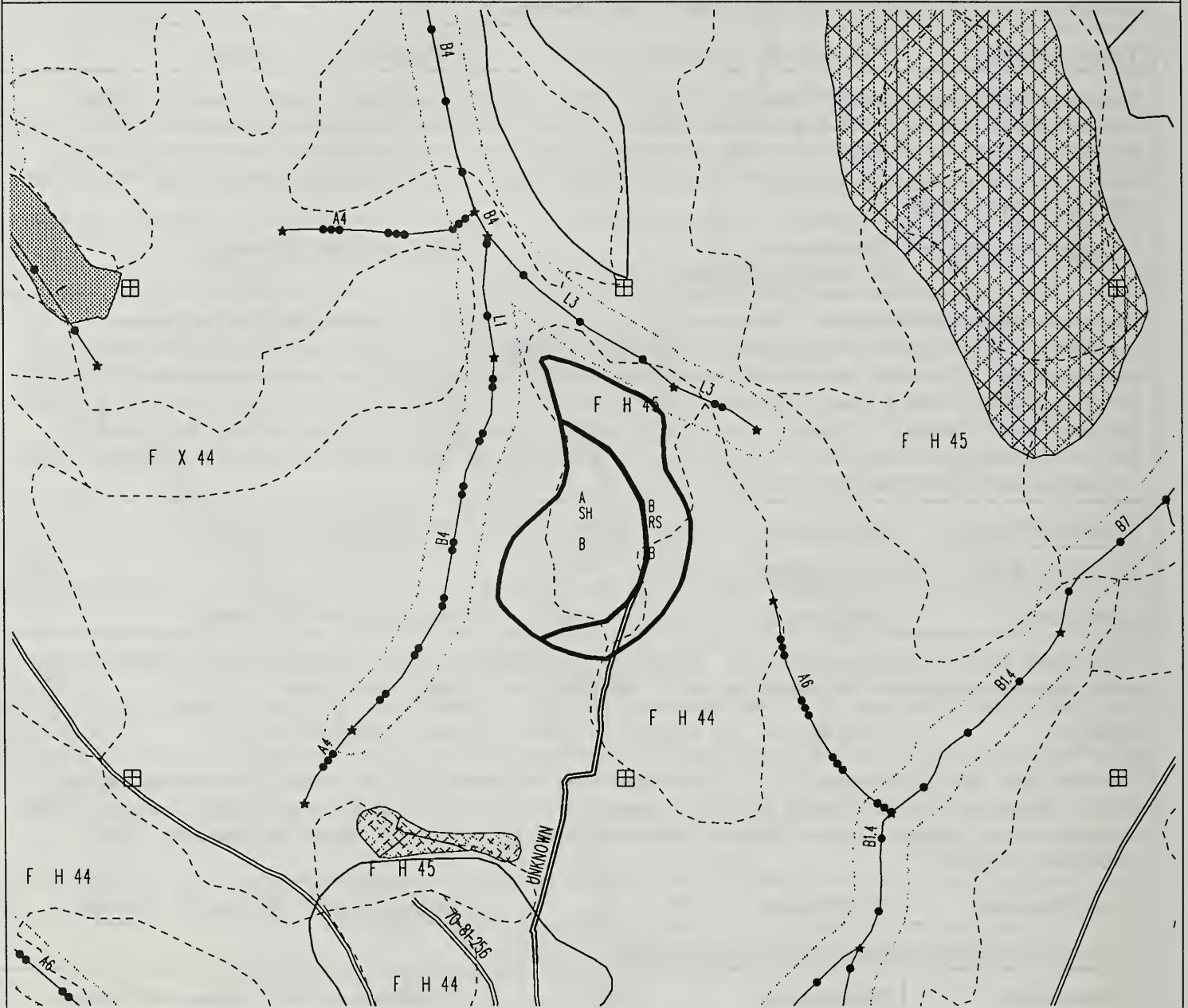
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| VCU #: 574 | UNIT #: 405 | QUARTER QUAD: D3SW | PHOTO YR/#: 1991/990-45 |
| ACRES: 19.1 | VOL.: 545.4 MBF | LOGGING SYSTEM: Swingyarder/Running Skyline | |
| LANDSCAPE ZONE: Unit is within the Honker Divide watershed. | | | |
| Timber/Vegetation | Field Review: S. Karstens, 7/14/93 | Office Review: J. Goering | |
| Species composition predominantly hemlock with some cedar. Few spruce are present. Light amount of mistletoe infection evident in canopy. Muskeg incursions within the center of the unit. Alaska yellow cedar decline evident. Good advanced regeneration (candidate for release) consisting of hemlock and cedar. Consider partial retention/overstory removal. Thin in the ridge top area. Favor spruce and cedar as leave trees. Harvest all mistletoe infected hemlock and cut infected regeneration. | | | |
| Logging/Transportation | Field Review: M. Whitty/J. Herzberg/C. Giles, 7/24/93 | Office Review: E. Urstadt | |
| Unit is accessed by Rd #70-81-24.1. Two spurs will access timber. The spurs combine for 2700' of medium construction. The field crew recommended shovel logging. I suggest that 35% slopes are unsafe and unproductive for shovel logging. If the yarder position was moved downslope 100' adequate deflection would occur on the N10E profile. Swingyard entire unit using running skyline; 66% uphill and 33% downhill yarding. Partial cut is possible. Northeast portion of unit has evidence of slides in steep soils. Blowdown is also evident on northeast portion. Recommend no harvest on slopes greater than 90% in northeast portion. Economics are fair. Partial suspension can be achieved. Full suspension can only be achieved by helicopter logging. | | | |
| Watershed/Fisheries | Field Review: B. Romey, 7/16/93 | Office Review: T. Stewart | |
| No streams in unit. Leave unit boundary the same. | | | |
| Soils/Geology | Field Review: M. Minnillo, 7/16/93 | Office Review: T. Stewart | |
| 120% slopes in the northeast portion of unit. Several sloughed off trees exposing conglomerate rock. Require at least partial suspension in northeast portion of unit; try to attain full. Rest of unit is low slopes. | | | |
| Wildlife | Field Review: M. Minnillo, 7/16/93 | Office Review: C. Confer | |
| Low deer sign. Bear sign throughout unit. Harvesting of unit will leave a large gap among predominantly muskeg habitat. Recommend meeting Level 1 structure by retaining an area of smaller timber along boundary designed to leave some cover along muskegs. Area is previously unharvested with a high degree of natural fragmentation. Hairy woodpecker observed. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit not seen from any priority travel route or use area. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Unstable bluff area excluded from harvest. The bluff will serve as a leave island. Snag patch will be retained for cavity nester habitat. Recommend Type A clearcut plus Type D to incorporate snag patch. Utilize partial suspension in areas of potential instability. Mitigation measures for this unit are as follows: F1, F3, F8, F10, W1, and W5. | | | |

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

VCU : 574

UNIT : 406

QUAD : D3-SW



- Revised Control Lake Project Boundary
- Post-Field Unit Boundary w/ Setting Codes
- Other Post-Field Unit Boundaries
- USFS Timber Types for Volc 4-7
- Eagle Tree Buffer of 330ft
- Existing & Rebuilt Roads
- F.S. Roads Under Construction
- Post-Field Proposed Roads
- Ahmu-Class 1 & Stream Chantypes
- Ahmu-Class 2 & Stream Chantypes
- Ahmu-Class 3 & Stream Chantypes
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- MMI 4
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- Landings
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.5 MILE

May 13, 1994

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

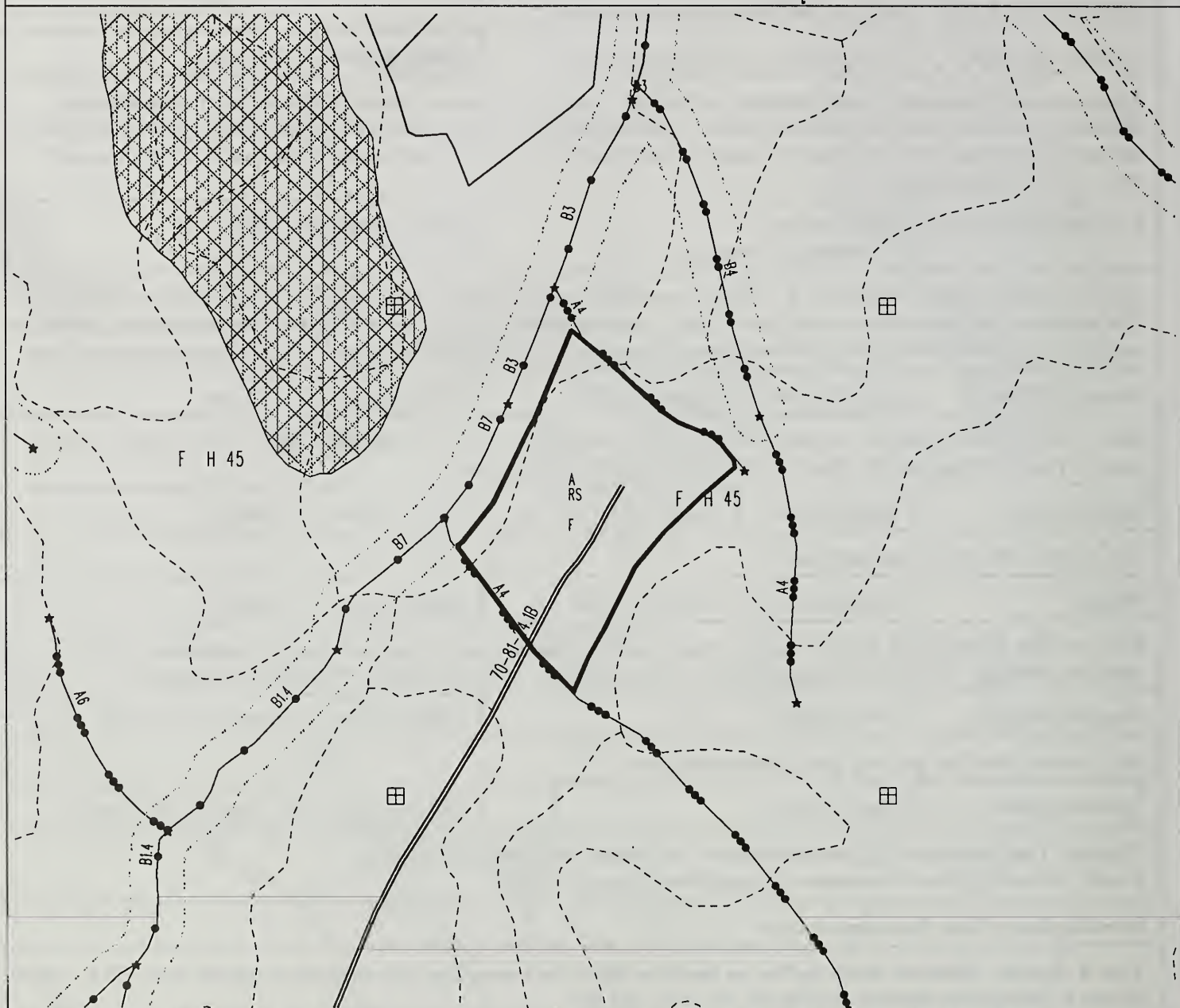
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|--|---|---|-------------------------|
| VCU #: 574 | UNIT #: 406 | QUARTER QUAD: D3SW | PHOTO YR/#: 1991/990-45 |
| ACRES: 13.9 | VOL.: 349.7 MBF | LOGGING SYSTEM: Swingyarder/Running Skyline, Shovel | |
| LANDSCAPE ZONE: Unit is within Honker Divide watershed. | | | |
| Timber/Vegetation | Field Review: S. Karstens, 7/15/93 | Office Review: J. Goering | |
| Species composition predominantly hemlock with some cedar. Few spruce are present. Regeneration predominantly hemlock with a few spruce but is lacking cedar. Poor regeneration on peak due to brush incursions. Low to moderate amounts of mistletoe infection evident in canopy. Moderately low volume, multi-canopy stand with < 50% canopy closure in the southern half. | | | |
| Logging/Transportation | Field Review: M. Whitty/J. Herzberg, 7/21/93 | Office Review: M. Whitty | |
| Unit is accessed by Road #70-81-25.5. The recommended logging system is 50% swing yard and 50% shovel logging. The maximum yarding distance is 400 feet. There is approximately 800 feet of a 100 foot stream buffer on the north and east sides. The south half of the unit was dropped due to lack of merchantable timber. The economics are fair to poor. | | | |
| Watershed/Fisheries | Field Review: B. Romey, 7/12/93 | Office Review: T. Stewart | |
| Stream 1 is an O/W, Class III. Stream 2 along N-NE portion of unit is Class I and IIa - 100' buffer. Stream 3 at NW corner of unit is Class IIa into Class I - 100' buffer plus 50' selective cut. | | | |
| Soils/Geology | Field Review: B. Romey, 7/12/93 | Office Review: T. Stewart | |
| Unit is fairly flat with no unstable soils. | | | |
| Wildlife | Field Review: B. Romey, 7/12/93 | Office Review: C. Confer | |
| Deer and bear activity high through muskeg around unit boundary. Snags in unit well used by sapsuckers. Level 1 structure retention. Unit is in a large previously unharvested area with high degree of natural fragmentation. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit not seen from any priority travel route or use area. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Type B clearcut. Maintain stream buffers as identified above; however, final unit boundary is greater than 150 ft. east of Stream 3. Mitigation measures include F5, F8, F10, and W4. | | | |

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

VCU : 574

UNIT : 407

QUAD : D3-SW



- Revised Control Lake Project Boundary
- Post-Field Unit Boundary w/ Setting Codes
- Other Post-Field Unit Boundaries
- USFS Timber Types for Volc 4-7
- Eagle Tree Buffer of 330ft
- Existing & Rebuilt Roads
- F.S. Roads Under Construction
- Post-Field Proposed Roads
- Ahmu-Class 1 & Stream Chantypes
- Ahmu-Class 2 & Stream Chantypes
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- Channel Type Change

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May 13, 1994

.5 MILE

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

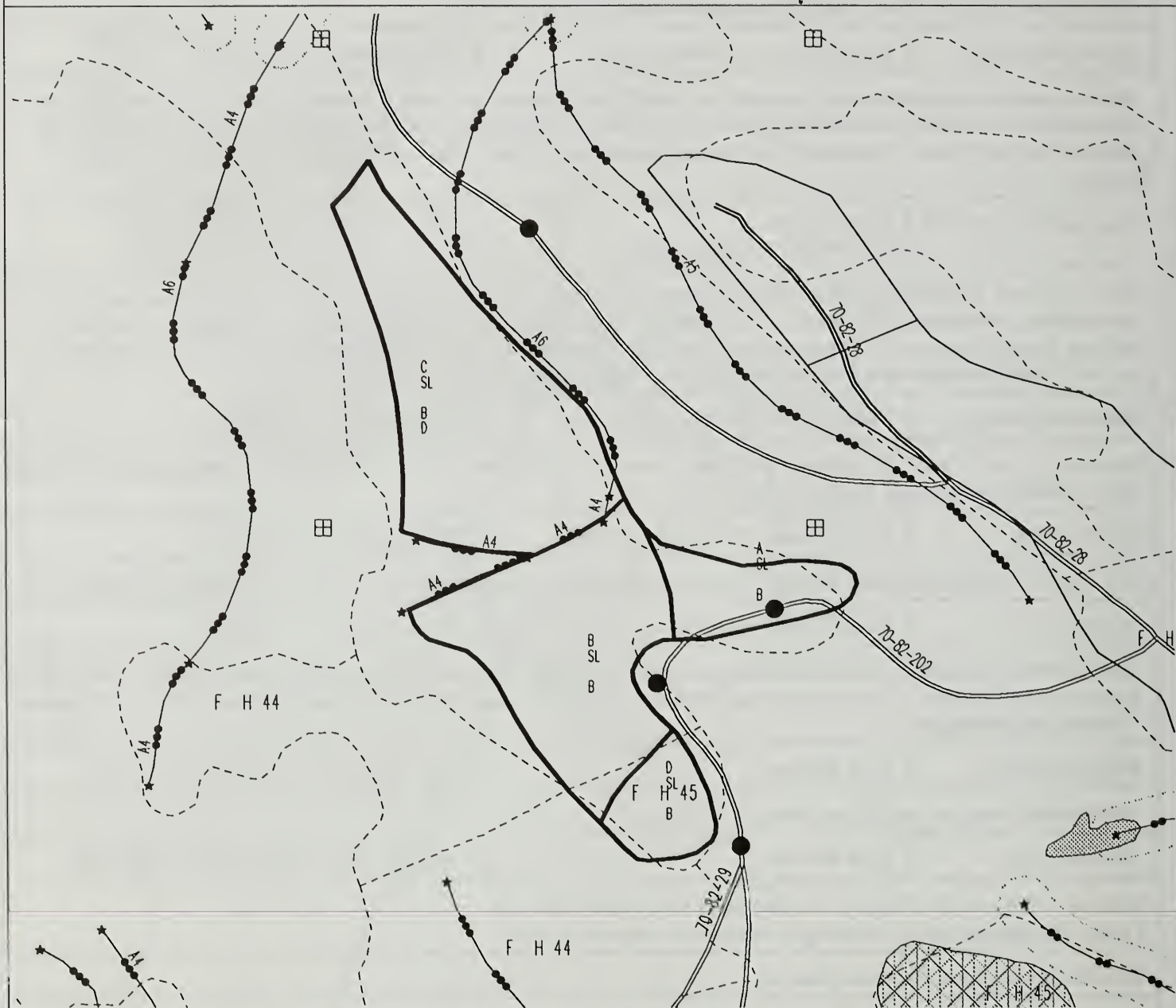
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|--|--|---|-------------------------|
| VCU #: 574 | UNIT #: 407 | QUARTER QUAD: D3SW | PHOTO YR/#: 1991/990-45 |
| ACRES: 17.4 | VOL.: 557.7 MBF | LOGGING SYSTEM: Swingyarder/Running Skyline | |
| LANDSCAPE ZONE: Unit is within the proposed Honker block. | | | |
| Timber/Vegetation | Field Review: G. Hedin, 7/20/93 | Office Review: J. Goering | |
| Species composition predominantly hemlock but includes some spruce and cedar. Regeneration predominantly hemlock and includes a few cedar but is lacking spruce. Rock bluffs on the higher elevations of the unit. Thin soils, poor soil drainage throughout unit. Moderately low volume, multi-canopy stand with <50% canopy closure in the southeast portion. | | | |
| Logging/Transportation | Field Review: M. Whitty/C. Giles, 7/29/93 | Office Review: E. Urstadt | |
| Unit is accessed by Rd #70-81-24.1. Three landings are needed. 0+00R will need fill, the other two have easy construction. Swingyard; 75% uphill, 25% downhill. One area of blind lead (in northwest portion) can be logged by hanging through and across a Class I buffer. The 100' Class I buffer is along the northwest edge. The east portion of unit was deleted because of impractical road access. The economics are fair to good. | | | |
| Watershed/Fisheries | Field Review: B. Romey, 7/12/93 | Office Review: T. Stewart | |
| Streams 1, 3, and 4 are O/W, split yard. Stream 2 needs a 100' buffer, B/W. 10' falls occur on stream northwest of unit where channel type changes from B3 to B7. | | | |
| Soils/Geology | Field Review: B. Romey, 7/12/93 | Office Review: T. Stewart | |
| Wet soils on bedrock with steep slopes. Rock bluffs throughout unit (shallow soils). Partial suspension required. | | | |
| Wildlife | Field Review: C. Confer, 7/12/93 | Office Review: C. Confer | |
| Level I structure retention. Murrelet occupying stand east of unit; fly-overs documented for unit (7/13/93). Surveyed for goshawks - no response. Deer and bear sign evident. Unit is in a large previously unharvested area with a high degree of natural fragmentation. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit not seen from any priority travel route or use area. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Unit boundary modified to keep unit between the split yard streams. Type F seed tree cut. Maintain stream buffers as identified above. Achieve partial suspension. Allow hanging through and across Class I buffer to avoid blind lead. Investigation is recommended to determine if the 10' falls is a complete or partial anadromous fish barrier. If it is a complete barrier, portion upstream of barrier should be downgraded to Class II. Mitigation measures for this unit are as follows: F5, F6, F8, F10, and W2. | | | |

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

VCU : 574

UNIT : 408

QUAD : D3-SW



- Revised Control Lake Project Boundary
- Post-Field Unit Boundary w/ Setting Codes
- Other Post-Field Unit Boundaries
- USFS Timber Types for Volc 4-7
- Eagle Tree Buffer of 330ft
- Existing & Rebuilt Roads
- F.S. Roads Under Construction
- Post-Field Proposed Roads
- Ahmu-Class 1 & Stream Chantypes
- Ahmu-Class 2 & Stream Chantypes
- Ahmu-Class 3 & Stream Chantypes
- Channel Type Change

- Lakes and Ponds
- Second Growth Units
- MMI 4
- McGilvery > 41

- Landings
- Stream & Lake NoCUT Buffers

May 13, 1994

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

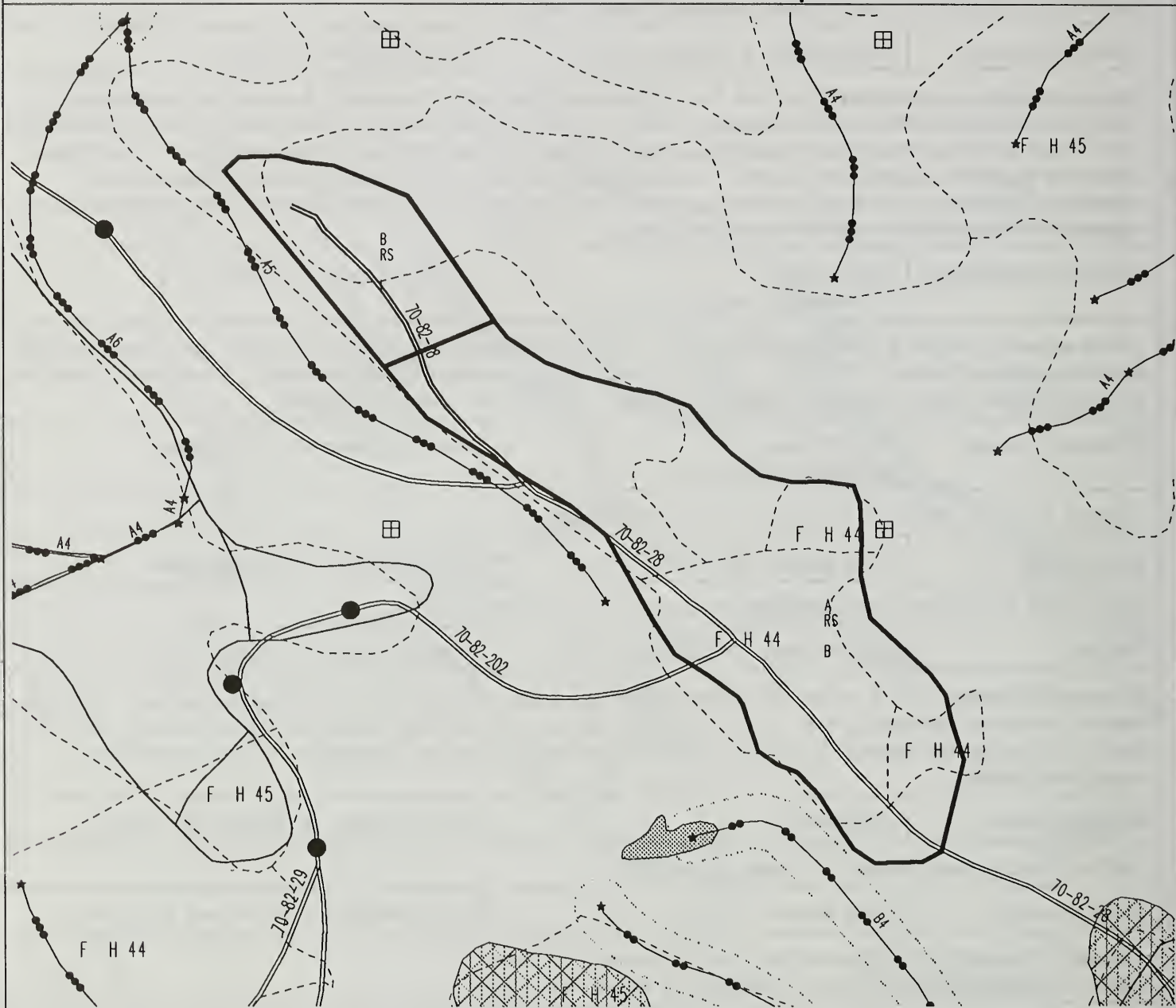
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|--|--|--|-------------------------|
| VCU #: 574 | UNIT #: 408 | QUARTER QUAD: D3SW | PHOTO YR/#: 1991/990-89 |
| ACRES: 44.5 | VOL.: 1040.2 MBF | LOGGING SYSTEM: Slackline with large tower | |
| LANDSCAPE ZONE: The unit is in the proposed Honker block. | | | |
| Timber/Vegetation | Field Review: S. Karstens, 6/21/93 | Office Review: J. Goering | |
| Species composition predominantly hemlock but includes some cedar and a few spruce. Regeneration predominantly hemlock and includes a few cedar but is lacking spruce. Low to moderate amounts of stem decay evident in hemlock and cedar. High erosive potential due to many small seeps, streams, thin soils, and poor soil drainage areas. Fairly dense understory vegetation. Salmonberry present. Good advanced regeneration (candidate for release). Minimize soil compaction/displacement and avoid yarding over riparian areas by use of full suspension or helicopter. Promote spruce regeneration through shelterwood harvest and/or planting. | | | |
| Logging/Transportation | Field Review: B. Webster/K. Martin, 6/18/93 | Office Review: M. Whitty | |
| Unit is accessed by Road #70-82-20 and #70-82-20.2. The recommended logging system is a large tower using slackline. Maximum yarding distance is 1300 feet. Landing 14+90 will require artificial guyline anchors. Stream on NE edge will be full suspended. Eighty percent of yarding is downhill. Unit has low economic feasibility. | | | |
| Watershed/Fisheries | Field Review: B. Romey, 6/15/93 and 7/31/93 | Office Review: G. McNaughton | |
| Streams 1, 2, and 3 are Class III, O/W, split yard, full suspension. | | | |
| Soils/Geology | Field Review: B. Romey, 7/31/93 | Office Review: G. McNaughton | |
| Steep slopes, some seeps around stream 2. Partial suspension recommended. | | | |
| Wildlife | Field Review: M. Minnillo, 7/31/93 | Office Review: C. Confer | |
| Recommend meeting Level 1 structure by maintaining at least a 100' select harvest prescription leaving trees < 15" on muskeg complex to the north of unit. This will help provide cover for deer/bear travel corridor in this area. This VCU has no previous harvest within its boundaries, but has a high degree of natural fragmentation. Two red-breasted sapsuckers observed. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit not seen from any priority travel route or use area. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| The northeastern unit boundary will have a Type I selective harvest prescription for at least 100' leaving trees < 15". Stand exam plots show few intermediate sized trees, but good regeneration. Type B clearcut and Type D with a finger left between the water quality streams. Area between split yard streams on west side of unit will be excluded as a leave island. Schedule regeneration survey to determine possible need for planting spruce. Mitigation measures for this unit are as follows: F6, F8, F10, W1, and W4. | | | |



















CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

VCU : 574

UNIT : 409

QUAD : D3-SW



- | | | | |
|---|---|---|-----------------------------|
|  | Revised Control Lake Project Boundary |  | Lakes and Ponds |
|  | Post-Field Unit Boundary w/ Setting Codes |  | Second Growth Units |
|  | Other Post-Field Unit Boundaries |  | MMI 4 |
|  | USFS Timber Types for Volc 4-7 |  | McGilvery > 41 |
|  | Eagle Tree Buffer of 330ft |  | Landings |
|  | Existing & Rebuilt Roads |  | Stream & Lake NoCUT Buffers |
|  | F.S. Roads Under Construction | | |
|  | Post-Field Proposed Roads | | |
|  | Ahmu-Class 1 & Stream Chantypes | | |
|  | Ahmu-Class 2 & Stream Chantypes | | |
|  | Ahmu-Class 3 & Stream Chantypes | | |
|  | Channel Type Change | | |

May 13, 1994

.5 MILE

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

| | | | |
|---|---|---|-------------------------|
| VCU #: 574 | UNIT #: 409 | QUARTER QUAD: D3SW | PHOTO YR/#: 1991/990-89 |
| ACRES: 52.2 | VOL.: 1445.7 MBF | LOGGING SYSTEM: Swingyarder/Running Skyline | |
| LANDSCAPE ZONE: Unit is in the proposed Honker Block. | | | |
| Timber/Vegetation | Field Review: T. Stecher, 6/23/93 | Office Review: J. Goering | |
| Species composition predominantly hemlock with some cedar. Few spruce are present. Regeneration mostly on nurse logs and consists of hemlock. Alaska yellow cedar decline evident. Low to moderate amounts of stem decay evident in hemlock. Windthrow damage present in middle portion of unit. Rocky, relatively thin soils and rock bluffs on the higher elevations of the unit. Promote spruce/cedar regeneration through planting. | | | |
| Logging/Transportation | Field Review: C. Barnhart/ B. Wilkinson/K. Martin, 6/16/93 | Office Review: Whitty, 9/15/93 | |
| Unit is accessed by Road #70-82-28 which has 6140 feet of easy construction. The recommended logging system is swing yard with running skyline. Ninety-five percent of the yarding is downhill. The maximum yarding distance is 450 feet. Partial suspension is available in majority of the unit. The northeastern boundary was lowered and put below rock bluffs. | | | |
| Watershed/Fisheries | Field Review: B. Romey, 6/15/93 | Office Review: T. Stewart | |
| No concerns; no streams in unit. One Class III, O/W by southwest corner of unit. Split yard directional fall. | | | |
| Soils/Geology | Field Review: M. Minnillo, 8/14/93 | Office Review: T. Stewart | |
| Soils are generally stable but are loose and rocky in places. Partial suspension attainable through most of unit; this will avoid most or all of unstable areas. | | | |
| Wildlife | Field Review: M. Minnillo, 8/14/93 | Office Review: C. Confer | |
| Recommend maintaining south-western unit boundary at least 100' from edge of timber as this area has been used by nesting Canada geese. Heavy bear sign/use throughout area. Maintain minimum Level 1 structure retention. Unit is in a large unharvested area with a high degree of natural fragmentation. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit not seen from any priority travel route or use area. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Requires 50' selective harvest. Extend 100' buffer on Class II stream at southern unit boundary northward excluding low volume timber along edge of muskeg to protect Canada goose nesting area. Recommend Type B clearcut in remainder of unit. Partial cutting not feasible due to downhill yarding. Recommend selective harvest in northern half of unit. Use group selection (Type I) if possible to promote establishment of planted spruce and cedar. Type A clearcut in remainder of unit. Maintain Class II stream buffer at southern tip of unit. Directionally fall trees away from Class III along southwest boundary. Mitigation measures for this unit are as follows: F5, F6, F8, F10, W2, W4, and W11. | | | |

NO UNIT MAP
UNIT DROPPED OR DEFERRED

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

| | | | |
|--|---------------------------------|------------------------------|-------------------------|
| VCU #: 574 | UNIT #: 411 | QUARTER QUAD: D3SW | PHOTO YR/#: 1991/990-87 |
| ACRES: | VOL.: | LOGGING SYSTEM: | |
| | | | |
| Timber/Silviculture | Field Review: | Office Review: | |
| | | | |
| Logging/Transportation | Field Review: | Office Review: | |
| | | | |
| Watershed/Fisheries | Field Review: B. Romey, 6/16/93 | Office Review: G. McMaughton | |
| Stream 1 needs a 100' buffer with an additional 100' selective harvest buffer. Stream 2 needs a 100' buffer. | | | |
| Soils/Geology | Field Review: B. Romey, 6/16/93 | Office Review: | |
| No concerns. | | | |
| Wildlife | Field Review: | Office Review: | |
| | | | |
| Visual/Recreation | Field Review: | Office Review: | |
| | | | |
| Other Resources | Field Review: | Office Review: | |
| | | | |
| Interdisciplinary Team Recommendations | | Reviewed By: | |
| Same as 412, adjacent to other units in our unit pool. | | | |

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

VCU : 574

UNIT : 413

QUAD : D3-SW



- Revised Control Lake Project Boundary
- Post-Field Unit Boundary w/ Setting Codes
- Other Post-Field Unit Boundaries
- USFS Timber Types for Volc 4-7
- Eagle Tree Buffer of 330ft
- Existing & Rebuilt Roads
- F.S. Roads Under Construction
- Post-Field Proposed Roads
- Ahmu-Class 1 & Stream Chantypes
- Ahmu-Class 2 & Stream Chantypes
- Ahmu-Class 3 & Stream Chantypes
- Channel Type Change

- Lakes and Ponds
- Second Growth Units
- MMI 4
- McGilvery > 41
- Landings
- Stream & Lake NoCUT Buffers

May 13, 1994

.5 MILE

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

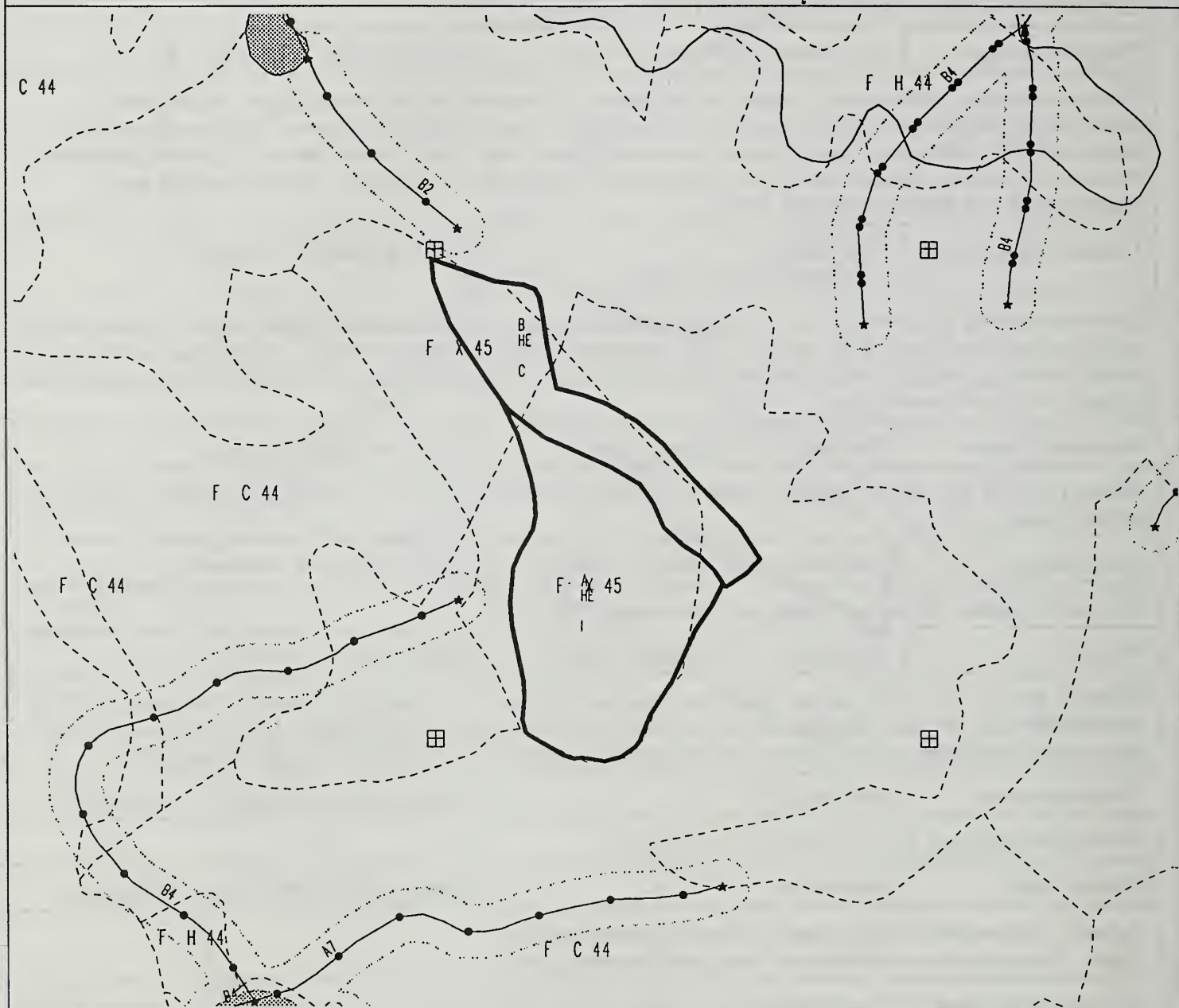
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|--|---|---|-------------------------|
| VCU #: 574 | UNIT #: 413 | QUARTER QUAD: D3SW | PHOTO YR/#: 1991/990-46 |
| ACRES: 53.6 | VOL.: 557.5 MBF | LOGGING SYSTEM: Swingyarder/Running Skyline, Shovel | |
| LANDSCAPE ZONE: Unit is within Honker Divide watershed. | | | |
| Timber/Vegetation | Field Review: B. Hasebe, 7/12/93 | Office Review: J. Goering | |
| Species composition predominantly hemlock and cedar with a few spruce and lodgepole present. Regeneration predominantly hemlock with a few spruce but is lacking cedar. Dense understory vegetation. Alaska yellow cedar decline evident. Low volume, mixed-species, multi-canopy stand with < 50% canopy closure & low site productivity. Muskeg incursions incorporated with mixed species, low volume timber in some areas. Some areas have poor regeneration due to thin soil, poor soil drainage. | | | |
| Logging/Transportation | Field Review: K. Martin/J. Spolar, 7/20/93 | Office Review: M. Whitty | |
| Unit is accessed by Road #70-81-13.7. The recommended logging system is downhill logging with swing yarder on 40% of the unit and shovel logging the remainder. The maximum yarding distance is 400 feet. Artificial guy anchors may be needed for swing yarding. One hundred foot stream buffers exist on northeast and east boundaries. Economics are fair. Tailholds may need tie-backs also. | | | |
| Watershed/Fisheries | Field Review: B. Romey, 7/09/93 | Office Review: T. Stewart | |
| Stream 1 needs a 100' buffer. Stream 2 needs a 100' no-harvest buffer plus a 50' selective harvest buffer. Barrier out of unit on Stream 1. | | | |
| Soils/Geology | Field Review: M. Minnillo, 7/09/93 | Office Review: T. Stewart | |
| No instability noted. Slopes are stable, and predominantly flat. | | | |
| Wildlife | Field Review: M. Minnillo, 7/09/93 | Office Review: M. Hall | |
| Moderate deer use observed. Several deer in area observed. Generally moderate hiding cover. Good forage but low wildlife observed. No major wildlife concerns as neighboring areas consist of like habitat. Low to moderate bear use. Recommend maintaining structure between muskeg patches. Retain Level I structure - contiguous old-growth. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit not seen from any priority travel route or use area. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Avoid forested muskeg areas due to regeneration concerns. Type A clearcut with some inclusions where good regeneration exists in shovel log areas. Conkiler planting yellow cedar and spruce to maintain species composition. Maintain 100' buffer on Class II stream at southeast tip. Class I stream along northeast boundary should receive a 100' no-cut plus 50' selective cut buffer. Mitigation measures for this unit are as follows: F5, F8, F10, and W5. | | | |

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

VCU : 574

UNIT : 414

QUAD : D3-SW



- Revised Control Lake Project Boundary
- Post-Field Unit Boundary w/ Setting Codes
- Other Post-Field Unit Boundaries
- USFS Timber Types for Volc 4-7
- Eagle Tree Buffer of 330ft
- Existing & Rebuilt Roads
- F.S. Roads Under Construction
- Post-Field Proposed Roads
- Ahmu-Class 1 & Stream Chatypes
- Ahmu-Class 2 & Stream Chatypes
- Ahmu-Class 3 & Stream Chatypes
- Channel Type Change

- Lakes and Ponds
- Second Growth Units
- MMI 4
- McGilvery > 41
- Landings
- Stream & Lake NoCUT Buffers

May 13, 1994

0.5 MILE

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

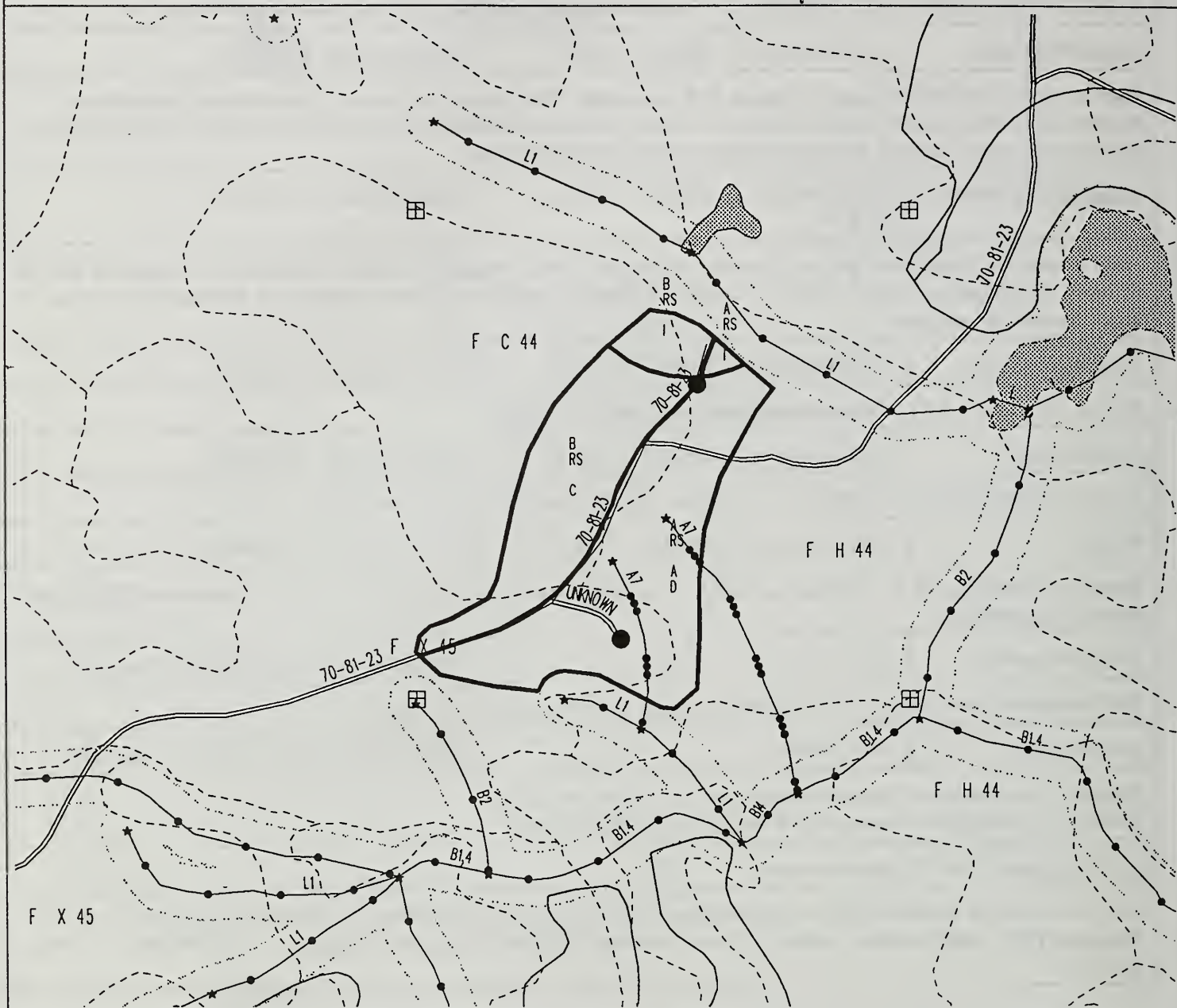
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| VCU #: 574 | UNIT #: 414 | QUARTER QUAD: D3SW | PHOTO YR/#: 1991/990-48 |
| ACRES: 26.6 | VOL.: 653.7 MBF | LOGGING SYSTEM: Helicopter | |
| LANDSCAPE ZONE: Unit is within Honker Divide watershed on boundary of proposed Honker Block. | | | |
| Timber/Vegetation | Field Review: T. Stecher, 7/31/93 | Office Review: J. Goering | |
| Species composition predominantly hemlock with some cedar. Few spruce are present. Regeneration predominantly hemlock but includes a few cedar and spruce. Alaska yellow cedar decline evident. Light windthrow damage present in small area of unit. Promote spruce/cedar regeneration through planting. | | | |
| Logging/Transportation | Field Review: T. Wetzel/D. Foster, 8/06/93 | Office Review: M. Whitty | |
| Road to unit was flagged but was not economical at present costs. Helicopter logging is feasible to a landing SE of Unit 577-425. Flight path averages -11% for 1/2 mile. Helicopter yarding will allow harvesting in the visually restricted area. Economics are poor. | | | |
| Watershed/Fisheries | Field Review: B. Romey, 7/29/93 | Office Review: T. Stewart | |
| Stream 1 is Class I, B/W. Maintain unit boundary at least 100' away. | | | |
| Soils/Geology | Field Review: M. Minnillo, 7/29/93 | Office Review: T. Stewart | |
| Low to moderate slopes throughout unit. Minimal windthrow and no signs of instability. | | | |
| Wildlife | Field Review: M. Minnillo, 7/29/93 | Office Review: C. Confer | |
| Structure retention Level I. Maintain unit north of boundary out of muskeg. Large previously unharvested area; high natural fragmentation. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit is not seen from Honker Canoe Route but nearby knob south of unit is seen. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Unit was expanded southward into visibly sensitive area using partial cutting (Type I) and helicopter yarding to meet Retention VQO, while northern portion is Type C clearcut. Mitigation measures for this unit are as follows: V1, W2, and W3. | | | |

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

VCU : 574

UNIT : 415

QUAD : D3-SW



- Revised Control Lake Project Boundary
- Post-Field Unit Boundary w/ Setting Codes
- Other Post-Field Unit Boundaries
- USFS Timber Types for Volc 4-7
- Eagle Tree Buffer of 330ft
- Existing & Rebuilt Roads
- F.S. Roads Under Construction
- Post-Field Proposed Roads
- Ahmu-Class 1 & Stream Chantypes
- Ahmu-Class 2 & Stream Chantypes
- Ahmu-Class 3 & Stream Chantypes
- Channel Type Change

- Lakes and Ponds
- Second Growth Units
- MMI 4
- McGilvery > 41
- Landings
- Stream & Lake NoCUT Buffers

August 03, 1994

.5 MILE

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

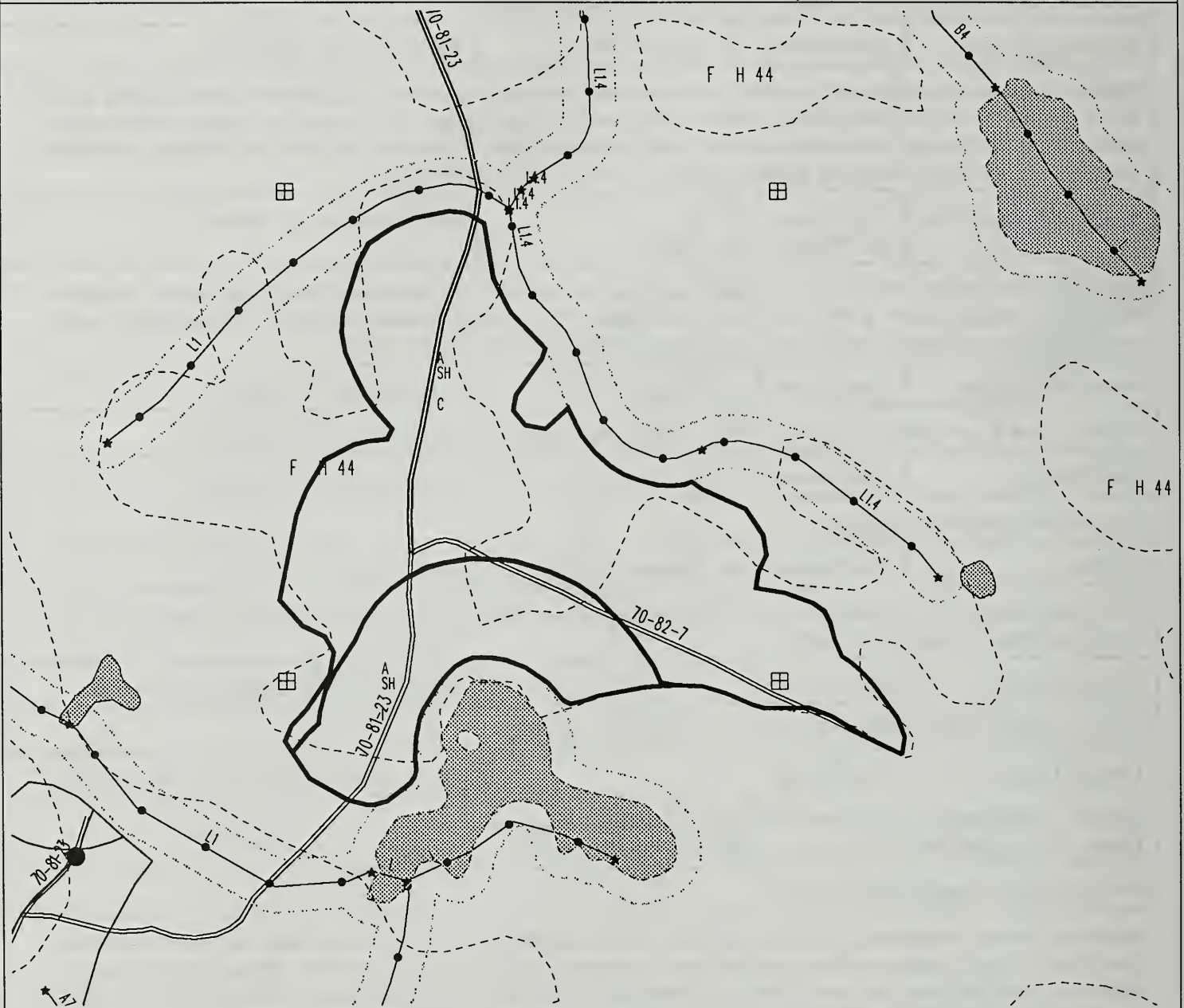
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| VCU #: 574 | UNIT #: 415 | QUARTER QUAD: D3SW | PHOTO YR/#: 1991/990-48 |
| ACRES: 28.5 | VOL.: 484.1 MBF | LOGGING SYSTEM: Swingyarder/Running Skyline, Shovel | |
| LANDSCAPE ZONE: Unit is entirely within proposed Honker block. | | | |
| Timber/Vegetation | Field Review: M. Case, 8/2/93 | Office Review: J. Goering | |
| Species composition predominantly hemlock and cedar with a few spruce present. Regeneration predominantly hemlock with a few spruce but is lacking cedar. Alaska yellow cedar decline evident. Moderately low volume, multi-canopy stand with < 50% canopy closure and relatively low site productivity. Some thin soil; poor soil drainage throughout. Promote spruce/cedar regeneration through shelterwood harvest and/or planting. | | | |
| Logging/Transportation | Field Review: M. Whitty/C. Giles, 8/02/93 | Office Review: M. Whitty | |
| Unit is accessed by Road #70-81-25. Artificial guys may be needed for recommended swing yard system. Engineers found fish in stream to SW; a 100 foot buffer was flagged. The northern boundary follows a 100 foot stream buffer. Shovel logging is possible if ground slope restrictions are waived. Economics are fair. | | | |
| Watershed/Fisheries | Field Review: B. Romey, 7/28/93 | Office Review: T. Stewart | |
| Streams 1 and 4 are Class I, B/W, 100' TTRA buffer. Streams 2 and 3 are Class III, O/W, split yard. | | | |
| Soils/Geology | Field Review: M. Minnillo, 7/28/93 | Office Review: T. Stewart | |
| Low slopes; no signs of instability. | | | |
| Wildlife | Field Review: M. Minnillo, 7/28/93 | Office Review: C. Confer | |
| Low wildlife use due to generally wet site, open canopy and open shrub. Level 1 snag retention. Center of a large contiguous block of old-growth habitat. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit not seen from any priority travel route or use area. No concerns. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Northwest portion of unit excluded due to non-CFL, poor productivity, and regeneration concerns. Uphill (northwest) from road a Type C clearcut will be used leaving all unmerchantable trees where possible. Below road leave no-cut strips that include a leave area east of the large muskeg and both split yard streams areas. Cut strips will be Type A clearcuts. Achieve partial suspension due to predominance of wetlands. Split yard or fully suspend over both Class III streams in southeast portion of unit. This area may require shovel yarding. Maintain 100' buffer along Class I stream at south tip of unit. Mitigation measures for this unit are as follows: F5, F6, F8, F10, W3, and W5. | | | |

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

VCU : 574

UNIT : 416

QUAD : D3-SW



- Revised Control Lake Project Boundary
- Post-Field Unit Boundary w/ Setting Codes
- Other Post-Field Unit Boundaries
- USFS Timber Types for Volc 4-7
- Eagle Tree Buffer of 330ft
- Existing & Rebuilt Roads
- F.S. Roads Under Construction
- Post-Field Proposed Roads
- Ahmu-Class 1 & Stream Chantypes
- Ahmu-Class 2 & Stream Chantypes
- Ahmu-Class 3 & Stream Chantypes
- Channel Type Change

- Lakes and Ponds
- Second Growth Units
- MMI 4
- McGilvery > 41
- Landings
- Stream & Lake NoCUT Buffers

May 13, 1994

.5 MILE

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

| | | | |
|---|--|---|-------------------------|
| VCU #: 574 | UNIT #: 416 | QUARTER QUAD: D3SW | PHOTO YR/#: 1991/990-87 |
| ACRES: 61.7 | VOL.: 693.0 MBF | LOGGING SYSTEM: Shovel | |
| LANDSCAPE ZONE: Unit is entirely within proposed Honker Block and is adjacent to second quarter mile of scenic river corridor. | | | |
| Timber/Vegetation | Field Review: G. Hedin, 7/30/93 | Office Review: J. Goering | |
| Species composition predominantly cedar with hemlock and a few spruce and lodgepole present. Regeneration predominantly hemlock but includes cedar and spruce. Low volume, mixed-species, multi-canopy stand with < 50% canopy closure in the northeast portion. Muskeg incursions incorporated with mixed species, low volume timber in some areas. Some thin soil, poor soil drainage areas. Dense understory vegetation. | | | |
| Logging/Transportation | Field Review: K. Martin, T. Benthin 8/03/93 | Office Review: E. Urstadt | |
| Unit is accessed by Road #70-82-7 and 70-81-23. Shovel yarding to road is recommended. The unit has a 100 foot stream buffer on NE side and along lake to SE. IDT decision to not harvest south and east of road near lake is feasible. Economics are good. Recreation opportunities are good. | | | |
| Watershed/Fisheries | Field Review: B. Romey, 8/28/93 | Office Review: T. Stewart | |
| All streams are Class I, B/W, 100' TTRA buffer. | | | |
| Soils/Geology | Field Review: M. Minnillo, 7/28/93 | Office Review: T. Stewart | |
| No evidence of instability, low slopes. | | | |
| Wildlife | Field Review: M. Minnillo, 7/28/93 | Office Review: C. Confer | |
| Low big game use area; two sharp-shinned hawks were heard calling in unit. Level 1 structure retention. Structure will also be retained in stream buffer. A higher proportion of VC4 timber was found providing Canada goose habitat. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit not seen from any priority travel route or use area. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Type I harvest in selective harvest lake buffer. No-cut lake buffer maintains habitat for Canada geese and identified sharp-shinned hawks. Remainder of unit will be Type C clearcut leaving all unmerchantable trees. Maintain 100' buffers on Class I streams along north and east unit boundaries. Mitigation measures for this unit are as follows: F5, F8, F10, W3, W10, and W11. | | | |

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

VCU : 574

UNIT : 417

QUAD : D3-SW



- Revised Control Lake Project Boundary
- Post-Field Unit Boundary w/ Setting Codes
- Other Post-Field Unit Boundaries
- USFS Timber Types for Volc 4-7
- Eagle Tree Buffer of 330ft
- Existing & Rebuilt Roads
- F.S. Roads Under Construction
- Post-Field Proposed Roads
- Ahmu-Class 1 & Stream Chantypes
- Ahmu-Class 2 & Stream Chantypes
- Ahmu-Class 3 & Stream Chantypes
- Channel Type Change

- Lakes and Ponds
- Second Growth Units
- MMI 4
- McGilvery > 41
- Landings
- Stream & Lake NoCUT Buffers

August 08, 1994

.5 MILE

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

| | | | |
|--|--|---|-------------------------|
| VCU #: 574 | UNIT #: 417 | QUARTER QUAD: D3SW | PHOTO YR/#: 1991/990-86 |
| ACRES: 19.9 | VOL.: 460.3 MBF | LOGGING SYSTEM: Shovel | |
| LANDSCAPE ZONE: Unit is within proposed Honker Block and partially within second 1/4 mile of scenic river corridor. | | | |
| Timber/Vegetation | Field Review: S. Karstens, 8/4/93 | Office Review: J. Goering | |
| Species composition predominantly hemlock and cedar with a few spruce present. Regeneration predominantly hemlock with a few spruce but is lacking cedar. Low to moderate amounts of mistletoe infection evident in canopy. Fairly dense understory vegetation. Harvest all mistletoe infected hemlock and cut infected regeneration. | | | |
| Logging/Transportation | Field Review: K. Martin/T. Benthin, 8/04/93 | Office Review: J. Doyal/E. Urstadt | |
| Unit is accessed by Road #70-81-33. The recommended harvest system is shovel logging. The northeast portion of the unit was dropped due to unmerchantable timber. The south and east sides follow 100 foot stream buffers. The economics are fair. | | | |
| Watershed/Fisheries | Field Review: B. Romey, 7/28/93 | Office Review: T. Stewart | |
| Streams 1, 2, and 3 are Class Ia, B/W, 100' no-cut buffer with an additional 100' selective cut buffer. Stream 4 is Class III, G/W. Use as unit boundary. | | | |
| Soils/Geology | Field Review: M. Minnillo, 7/28/93 | Office Review: T. Stewart | |
| Low slopes throughout unit. Low site index soils/muskeg in the northeast end of unit. Delete the area east of, and including the muskeg in northeast end of unit. | | | |
| Wildlife | Field Review: M. Minnillo, 7/28/93 | Office Review: C. Confer | |
| Low wildlife use area. Structure retention Level 1. Delete northeast end of near muskeg including muskeg in northeast end of unit. Snags will also be retained along stream buffers. Larger previously unharvested area with high degree of natural fragmentation. Avoid disturbance of wintering trumpeter swans by avoiding all human activity within 0.5 mile of known swan wintering areas during October 15 through March 15. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit not seen from any priority travel route or use area. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Drop northeast portion of unit due to low site index and muskeg areas. Class I buffers on east and south side of unit. Type B clearcut remaining mistletoe-infected trees along unit margin. Mitigation measures for this unit are as follows: F5, F8, F10, W2, and W5. | | | |

NO UNIT MAP

UNIT DROPPED OR DEFERRED

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

| | | | |
|------------|-------------|--------------------|----------------------------|
| VCU #: 574 | UNIT #: 418 | QUARTER QUAD: D3SW | PHOTO YR/#: 990-48-FL13 |
| ACRES: | VOL.: | LOGGING SYSTEM: | |

| | | |
|--|--|--------------------------|
| Timber/Silviculture | Field Review: | Office Review: |
| | | |
| Logging/Transportation | Field Review: K. Martin/B. Flatz, 8/06/93 | Office Review: |
| Dropped unit due to area. Unit has small knobs of timber totalling < 5 acres. Mostly non-CFL. | | |
| Watershed/Fisheries | Field Review: B. Romey, 7/28/93 | Office Review: |
| Streams 1 and 4 are Class I, B/W, 100' TTRA buffer. Stream 3 is Class IIa, B/W, 100' TTRA buffer. Stream 2 is Class IIb, O/W, split yard. | | |
| Soils/Geology | Field Review: M. Minnillo, 7/28/93 | Office Review: |
| Low slopes, generally a wet site; but timber is small. No stability concerns. | | |
| Wildlife | Field Review: M. Minnillo, 7/28/93 | Office Review: C. Confer |
| Low wildlife use area. Structure retention Level I. Structure will be retained in Class I stream buffer. Unit is in a large previously unharvested area with high natural fragmentation. | | |
| Visual/Recreation | Field Review: | Office Review: |
| | | |
| Other Resources | Field Review: | Office Review: |
| | | |
| Interdisciplinary Team Recommendations | Reviewed By: | |
| Unit deferred due to small acreage of CFL. | | |

NO UNIT MAP
UNIT DROPPED OR DEFERRED

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

| | | | |
|------------|-------------|--------------------|-------------------------------|
| VCU #: 574 | UNIT #: 419 | QUARTER QUAD: D3SW | PHOTO YR/#: 1991/13-990-98 |
| ACRES: | VOL.: | LOGGING SYSTEM: | |

| | | |
|--|---|--------------------------|
| Timber/Silviculture | Field Review: | Office Review: |
| | | |
| Logging/Transportation | Field Review: D. Foster/T. Wetzel, 8/07/93 | Office Review: M. Whitty |
| Dropped unit due to volume and area. Recommend removal from timber base. Non-CFL. | | |
| Watershed/Fisheries | Field Review: B. Romey, 7/30/93 | Office Review: |
| Streams 1, 2, 3, and 4 are Class IIa, B/W, 100' TTRA buffer. Streams 3a and 4a are Class IIb, O/W, split yard, directional fall. | | |
| Soils/Geology | Field Review: M. Minnillo, 7/30/93 | Office Review: |
| Low slopes, wet site with muskeg inclusions; however, timber is small so scarring of soil is not a major concern. | | |
| Wildlife | Field Review: M. Minnillo, 7/30/93 | Office Review: C. Confer |
| Low wildlife use area. Structure retention Level I. Large previously unharvested area with high degree of natural fragmentation. | | |
| Visual/Recreation | Field Review: | Office Review: |
| | | |
| Other Resources | Field Review: | Office Review: |
| | | |
| Interdisciplinary Team Recommendations | Reviewed By: | |
| Unit deferred due to low acreage of CFL. | | |

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

VCU : 574

UNIT : 420

QUAD : D3-SW



- Revised Control Lake Project Boundary
- Post-Field Unit Boundary w/ Setting Codes
- Other Post-Field Unit Boundaries
- USFS Timber Types for Volc 4-7
- Eagle Tree Buffer of 330ft
- Existing & Rebuilt Roads
- F.S. Roads Under Construction
- Post-Field Proposed Roads
- Ahmu-Class 1 & Stream Chantypes
- Ahmu-Class 2 & Stream Chantypes
- Ahmu-Class 3 & Stream Chantypes
- Channel Type Change

- Lakes and Ponds
- Second Growth Units
- MMI 4
- McGilvery > 41
- Landings
- Stream & Lake NoCUT Buffers

.5 MILE

May 13, 1994

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

| | | | |
|--|--|---|-------------------------|
| VCU #: 574 | UNIT #: 420 | QUARTER QUAD: D3SW | PHOTO YR/#: 1991/990-47 |
| ACRES: 39.5 | VOL.: 494.4 MBF | LOGGING SYSTEM: Swingyarder/Running Skyline | |
| LANDSCAPE ZONE: Unit is within Honker Divide watershed | | | |
| Timber/Vegetation | Field Review: G. Hedin, 7/12/93 | Office Review: J. Goering | |
| <p>Species composition predominantly hemlock and cedar with a few spruce and lodgepole present. Regeneration predominantly hemlock but includes a few cedar and spruce. Numerous muskegs are located around the unit. Some thin soil, poor soil drainage. Low volume, mixed-species, multi-canopy stand with < 50% canopy closure and low site productivity.</p> | | | |
| Logging/Transportation | Field Review: T. Wetzal/G. Slawson, 7/12/93 | Office Review: M. Whitty | |
| <p>Unit is accessed by Road #70-81-13.1. Swing yarding is recommended. Fifty percent is uphill yarding with maximum yarding distance of 500 feet. Partial cut is feasible especially for uphill yarding. Partial suspension is possible except in southeastern portion of unit. Partial cut may not be feasible in southeastern part of unit. Tailholds on southern muskeg may need tie-backs. Economics are marginal.</p> | | | |
| Watershed/Fisheries | Field Review: B. Romey, 7/09/93 | Office Review: A. Wolfson | |
| No streams in unit. Keep unit away from Class I lake on north end of unit if decide to shift unit boundary. | | | |
| Soils/Geology | Field Review: M. Minnillo, 7/09/93 | Office Review: A. Wolfson | |
| No instability problems. | | | |
| Wildlife | Field Review: M. Minnillo, 7/09/93 | Office Review: C. Confer | |
| <p>Deer trails and beds throughout unit. Fairly good hiding cover and abundant forage; however, little browse observed. Wolf sign observed. Maintain snags along muskegs on north and south unit boundaries. Large unharvested area with high degree of natural fragmentation.</p> | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit not seen from any priority travel route or use area. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| <p>Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit.</p> | | | |
| Interdisciplinary Team Recommendations | | | |
| <p>Partial cut feasible due to open, windfirm stand, logging system yarding uphill, and lack of pathogens. Type A clearcut above road (west) where downhill yarding occurs and Type E overstory removal below road, cutting all trees 14" DBH and larger. Mitigation measures for this unit are as follows: F5, F8, W2, and W5.</p> | | | |

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

VCU : 574

UNIT : 421

QUAD : D3-SW



- Revised Control Lake Project Boundary
- Post-Field Unit Boundary w/ Setting Codes
- Other Post-Field Unit Boundaries
- USFS Timber Types for Volc 4-7
- Eagle Tree Buffer of 330ft
- Existing & Rebuilt Roads
- F.S. Roads Under Construction
- Post-Field Proposed Roads
- Ahmu-Class 1 & Stream Chantypes
- Ahmu-Class 2 & Stream Chantypes
- Ahmu-Class 3 & Stream Chantypes
- Channel Type Change

- Lakes and Ponds
- Second Growth Units
- MMI 4
- McGilvery > 41
- Landings
- Stream & Lake NoCUT Buffers

May 13, 1994

0.5 MILE

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

| | | | |
|---|--|---|-------------------------|
| VCU #: 574 | UNIT #: 421 | QUARTER QUAD: D3SW | PHOTO YR/#: 1991/990-49 |
| ACRES: 40.2 | VOL.: 765.1 MBF | LOGGING SYSTEM: Helicopter | |
| LANDSCAPE ZONE: Unit is in the proposed Honker Block and Goshawk PFA Corridor. | | | |
| Timber/Vegetation | Field Review: S. Karstens | Office Review: J. Goering | |
| Species composition predominantly hemlock and cedar with a few spruce and lodgepole present. Regeneration predominantly hemlock and includes a few cedar but is generally lacking spruce. Light amount of mistletoe infection evident in canopy. Low volume, mixed-species, multi-canopy stand with < 50% canopy closure and low site productivity. Dense understory vegetation. Numerous muskegs are located around the unit. Merchantable timber is isolated in four pockets within the unit. Some thin soil, poor soil drainage areas. | | | |
| Logging/Transportation | Field Review: T. Wilkinson/D. Foster, 8/10/93 | Office Review: M. Whitty | |
| Recommend partial cut/helicopter log to Rd #70-81-3. Flight distance is approximately 1,500'; slope is 10%. Consider dropping from timber base due to low volume. Very poor economics. | | | |
| Watershed/Fisheries | Field Review: B. Romey, 7/30/93 | Office Review: T. Stewart | |
| Streams 1 and 3 are Class I, B/W, 100' no-cut buffer. Streams 3a, 3b and 5 are O/W, Class III, split yard, directional fall. Stream 4 is Class IIa, B/W, 100' no-cut buffer. Class I lake at south end requires 100' no-cut buffer, plus selective cut 100' to 500' away. | | | |
| Soils/Geology | Field Review: M. Minnillo, 7/30/93 | Office Review: T. Stewart | |
| No signs of instability observed except around edge of unit along muskeg on west side of unit. Recommended lowering unit boundary to 800' along muskeg. | | | |
| Wildlife | Field Review: M. Minnillo, 7/30/93 | Office Review: C. Confer | |
| Recommend lowering west unit boundary along muskeg to maintain some hiding cover for deer/bear in highly used area. Deer, bear, and wolf sign observed. Structure retention Level I. Butterfly Lake southeast of unit. Large unharvested area with high natural fragmentation. Potential goose habitat. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit not seen from any priority travel route or use area. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Type I group selection including selective harvest area within 100 to 500 feet of Class 1 lake. Maintain 100' no-cut buffer plus 50' selective cut buffer along Class I stream at southwest tip. Unit only has some small pockets of timber outside of large buffered area at southern tip. Helicopter yard timber pockets to road except for one pocket near center of unit which can be reached with a shovel. If no other helicopter units are in the area, yard any merchantable trees to road. Mitigation measures for this unit are as follows: F5, F6, F8, F10, W2, and W11. | | | |

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

VCU : 574

UNIT : 422

QUAD : D3-SW




- | | | | |
|--|---|--|-----------------------------|
| | Revised Control Lake Project Boundary | | Lakes and Ponds |
| | Post-Field Unit Boundary w/ Setting Codes | | Second Growth Units |
| | Other Post-Field Unit Boundaries | | MMI 4 |
| | USFS Timber Types for Volc 4-7 | | McGilvery > 41 |
| | Eagle Tree Buffer of 330ft | | Landings |
| | Existing & Rebuilt Roads | | Stream & Lake NoCUT Buffers |
| | F.S. Roads Under Construction | | |
| | Post-Field Proposed Roads | | |
| | Ahmu-Class 1 & Stream Chantypes | | |
| | Ahmu-Class 2 & Stream Chantypes | | |
| | Ahmu-Class 3 & Stream Chantypes | | |
| | Channel Type Change | | |

August 03, 1994

.5 MILE

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

| | | | |
|--|--|---|-------------------------|
| VCU #: 574 | UNIT #: 422 | QUARTER QUAD: D3SW | PHOTO YR/#: 1991/990-51 |
| ACRES: 10.9 | VOL.: 241.1 MBF | LOGGING SYSTEM: Swingyarder/Running Skyline | |
| LANDSCAPE ZONE: Unit is in north end of proposed Honker Block and is adjacent to the second quarter mile of scenic river corridor. | | | |
| Timber/Vegetation | Field Review: S. Karstens, 8/17/93 | Office Review: J. Goering | |
| Species composition predominantly hemlock and cedar with a few spruce present. Regeneration predominantly hemlock but includes some cedar and spruce. Low to moderate amounts of mistletoe infection evident in canopy. Steep, rocky, and shallow soils. Muskeg-like inclusions within the unit. | | | |
| Logging/Transportation | Field Review: J. Doyal/J. Herzberg, 8/11/93 | Office Review: E. Urstadt | |
| Unit is accessed by Road #70-81-3. The unit was modified to be east of a visual concern area and west of the 1/4 mile distance required from Honker Divide. Swing yarding is recommended; 90% downhill yarding. Partial cutting is feasible due to short yarding distances. Tie-backs for guy stumps are needed. Blowdown problems exist on north and west sides. Recommend a 50 foot nonmerchantable strip of trees along these sides. Economics are fair to poor. | | | |
| Watershed/Fisheries | Field Review: S. Tanguay, 7/15/93 | Office Review: G. McNaughton | |
| Directional fall trees away from Class III streams that form the north and south boundaries. | | | |
| Soils/Geology | Field Review: S. Tanguay, 7/15/93 | Office Review: G. McNaughton | |
| No concerns. Moderate gradient, fairly well drained, and stable soils. | | | |
| Wildlife | Field Review: S. Tanguay, 7/15/93 | Office Review: C. Confer | |
| Highly traveled by deer; high snags, low forage unit. Level 1 structure retention. Hairy woodpecker observed, Butterfly Lake to east; large muskeg complex to west. Area is currently unharvested without high level of natural fragmentation. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Based on profile analysis from Butterfly Lake unit is restricted to an upper boundary of 640' and a lower screening boundary of approximately 500'. Unit has high visual impact potential due to close proximity to Butterfly Lake and perpendicular slope aspect to views from lake and outlet. Blowdown potential presents large visual concern. Conduct pre-construction visual analysis in field to confirm visual screening of unit and road. Retention VQO to be met. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | Reviewed By: | |
| Eastern portion of unit was deleted due to scenic river corridor. Use single tree or group selection cutting (Type I) to maintain about 90% canopy cover in upper, western portion of unit to help blend in with adjacent forest above. The residual overstory trees will be managed with the resultant second growth to help meet visual concerns and structural diversity. Select mistletoe infected trees for cutting if possible and leave mistletoe-free unmerchantable trees. Minimize sidecasting from road due to visual reasons. Rock pits should be located with care. A landscape architect should be involved in reviewing final layout. Mitigation measures for this unit are as follows: F8, F  , V2, and W2. | | | |

NO UNIT MAP
UNIT DROPPED OR DEFERRED

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

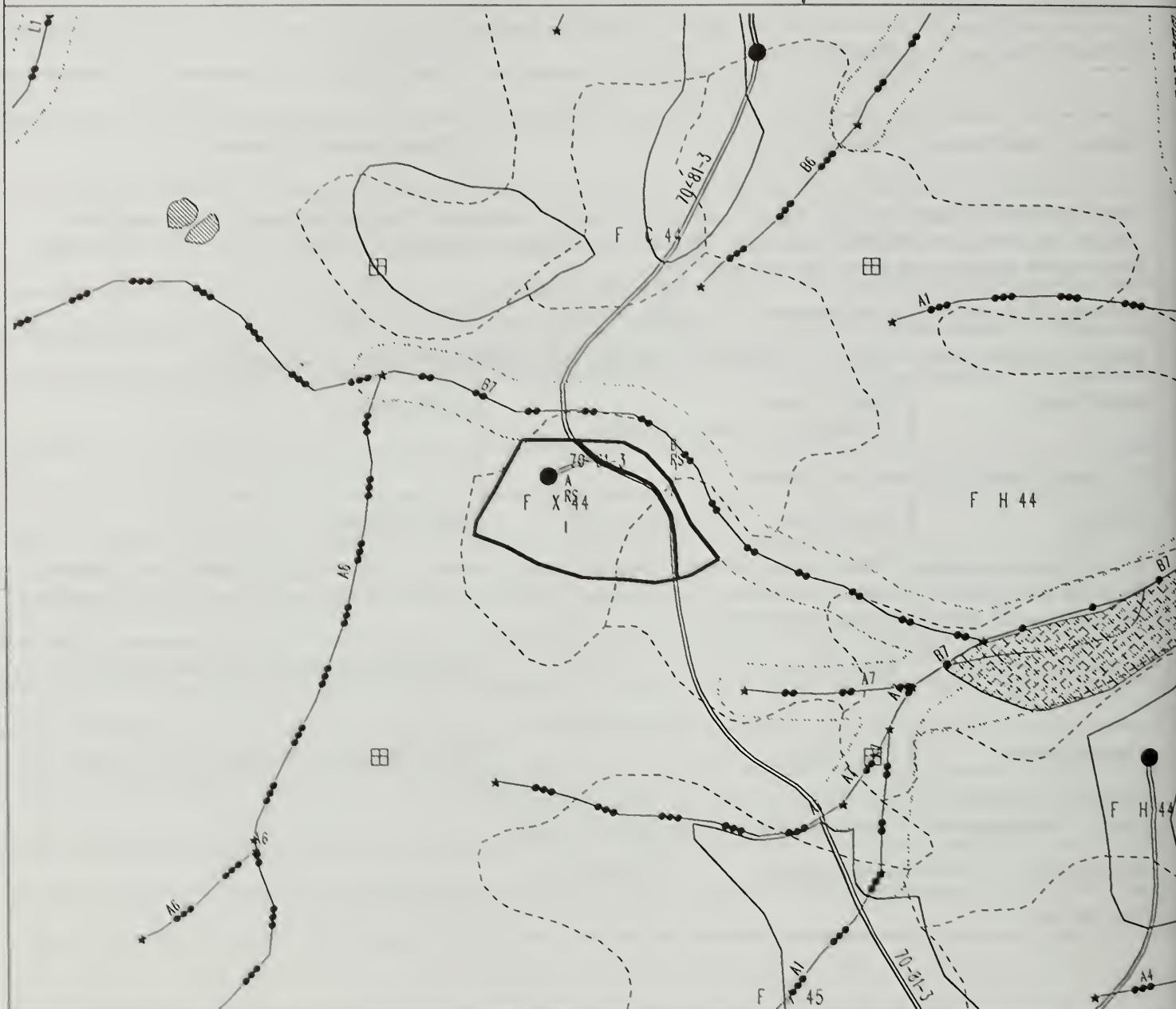
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|---|--|---|-------------------------|
| VCU #: 574 | UNIT #: 423 | QUARTER QUAD: | PHOTO YR/#: 1991/990-51 |
| ACRES: | VOL.: | LOGGING SYSTEM: | |
| LANDSCAPE ZONE: | | | |
| Timber/Vegetation | Field Review: | Office Review: | |
| | | | |
| Logging/Transportation | Field Review: | Office Review: E. Urstadt | |
| <p>These units were effected by visual concerns after the paper plan was made. The harvest system for the areas was changed and it required the above condition. This unit was dropped for adjacency to Unit 574-422. Unit 574-422 has better timber and less road to it. One unit must go!</p> | | | |
| Watershed/Fisheries | Field Review: S. Tanguay, 7/15/93 | Office Review: | |
| No strain channels near proposed unit boundary. Stay with proposed South boundary to assure this. | | | |
| Soils/Geology | Field Review: S. Tanguay/C. Confer, 7/15/93 | Office Review: | |
| Wet muskeg soils in this unit, poor timber. | | | |
| Wildlife | Field Review: C. Confer, 7/15/93 | Office Review: | |
| <p>Level I structure retention. Deer use documented. Two sapsuckers observed. Surveyed for Goshawks - no response. Surveyed for murrelets - presence documented, no occupancy. Lake more than 1/2 mile east of unit; muskeg complexes throughout area. Previously unharvested area.</p> | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| <p>Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit.</p> | | | |
| Interdisciplinary Team Recommendations | | Reviewed By: | |
| Unit deferred. | | | |

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

VCU : 574

UNIT : 424

QUAD : D3-SW



- Revised Control Lake Project Boundary
- Post-Field Unit Boundary w/ Setting Codes
- Other Post-Field Unit Boundaries
- USFS Timber Types for Volc 4-7
- Eagle Tree Buffer of 330ft
- Existing & Rebuilt Roads
- F.S. Roads Under Construction
- Post-Field Proposed Roads
- Ahmu-Class 1 & Stream Chantypes
- Ahmu-Class 2 & Stream Chantypes
- Ahmu-Class 3 & Stream Chantypes
- Channel Type Change

- Lakes and Ponds
- Second Growth Units
- MMI 4
- McGilvery > 41
- Landings
- Stream & Lake NoCUT Buffers

August 03, 1994

.5 MILE

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

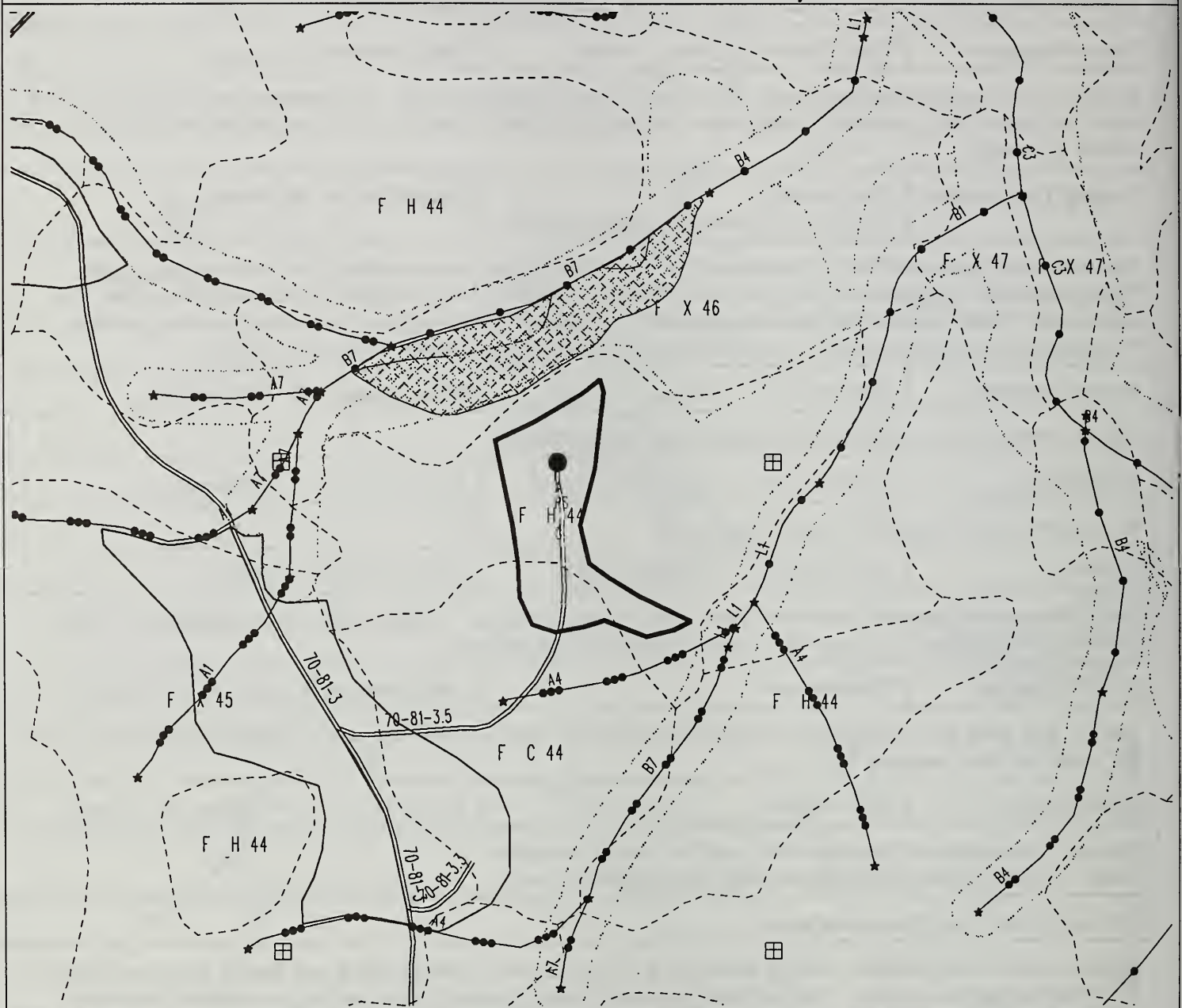
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|---|---|---|-------------------------|
| VCU #: 574 | UNIT #: 424 | QUARTER QUAD: D3SW | PHOTO YR/#: 1991/990-51 |
| ACRES: 9.2 | VOL.: 230.4 MBF | LOGGING SYSTEM: Swingyarder/Running Skyline | |
| LANDSCAPE ZONE: Unit is within proposed Honker Block and is 1/2 mile from the Thorne River. | | | |
| Timber/Vegetation | Field Review: J. Miller, 8/7/93 | Office Review: J. Goering | |
| Species composition predominantly hemlock but includes some spruce and cedar. Regeneration predominantly hemlock with a few spruce but is generally lacking cedar. Muskeg inclusions within the unit. Light amount of mistletoe infection evident in canopy. | | | |
| Logging/Transportation | Field Review: J. Doyal/J. Herzberg/T. Hoshall, 8/10/93 | Office Review: M. Whitty | |
| Unit is accessed by Road #70-81-3.5 and spur 70-81-3.6. The logging system is swing yard with running skyline. Partial suspension is possible in 50% of the unit. Where tailholds are poor, a highlead system will be used (no suspension). South boundary has blowdown potential. A nonmerch leave strip may help solve blowdown problems. Partial cutting is not possible due to lack of lift trees and lack of good tailholds. Economics are fair. | | | |
| Watershed/Fisheries | Field Review: S. Tanguay, 7/16/93 | Office Review: G. McNaughton | |
| Class IIa stream to the northeast of unit requires 100' no cut buffer. | | | |
| Soils/Geology | Field Review: S. Tanguay, 7/16/93 | Office Review: G. McNaughton | |
| No concerns. Low to moderate slopes, stable soils. | | | |
| Wildlife | Field Review: C. Confer, 7/16/93 | Office Review: C. Confer | |
| Level one structure retention. Butterfly Lake within 1/2 mile northeast. Muskeg complexes throughout area. Deer observed; deer and bear sign observed. Large, currently unharvested area. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit not seen from any visual priority travel route or use area. Road north of unit may be visible from Butterfly Lake and would not meet retention VQO. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Portion of unit below road (east) will be selectively harvested (Type I) cutting hemlock and leaving spruce and cedar for future uneven-age management. This may also provide a source of specialty wood and help to maintain structure in conjunction with stream buffer. The portion of unit above road (west) will be Type C clearcut leaving all unmerchantable trees where possible. Along the road maintain the high value cedar for small sale opportunity. Maintain 100' buffer on Class II stream along north boundary. Mitigation measures for this unit are as follows: F5, F8, F10, W2, and W3. | | | |

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

VCU : 574

UNIT : 425

QUAD : D3-SW



- Revised Control Lake Project Boundary
- Post-Field Unit Boundary w/ Setting Codes
- Other Post-Field Unit Boundaries
- USFS Timber Types for Volc 4-7
- Eagle Tree Buffer of 330ft
- Existing & Rebuilt Roads
- F.S. Roads Under Construction
- Post-Field Proposed Roads
- Ahmu-Class 1 & Stream Chantypes
- Ahmu-Class 2 & Stream Chantypes
- Ahmu-Class 3 & Stream Chantypes
- Channel Type Change

- Lakes and Ponds
- Second Growth Units
- MMI 4
- McGilvery > 41
- Landings
- Stream & Lake NoCUT Buffers

.5 MILE

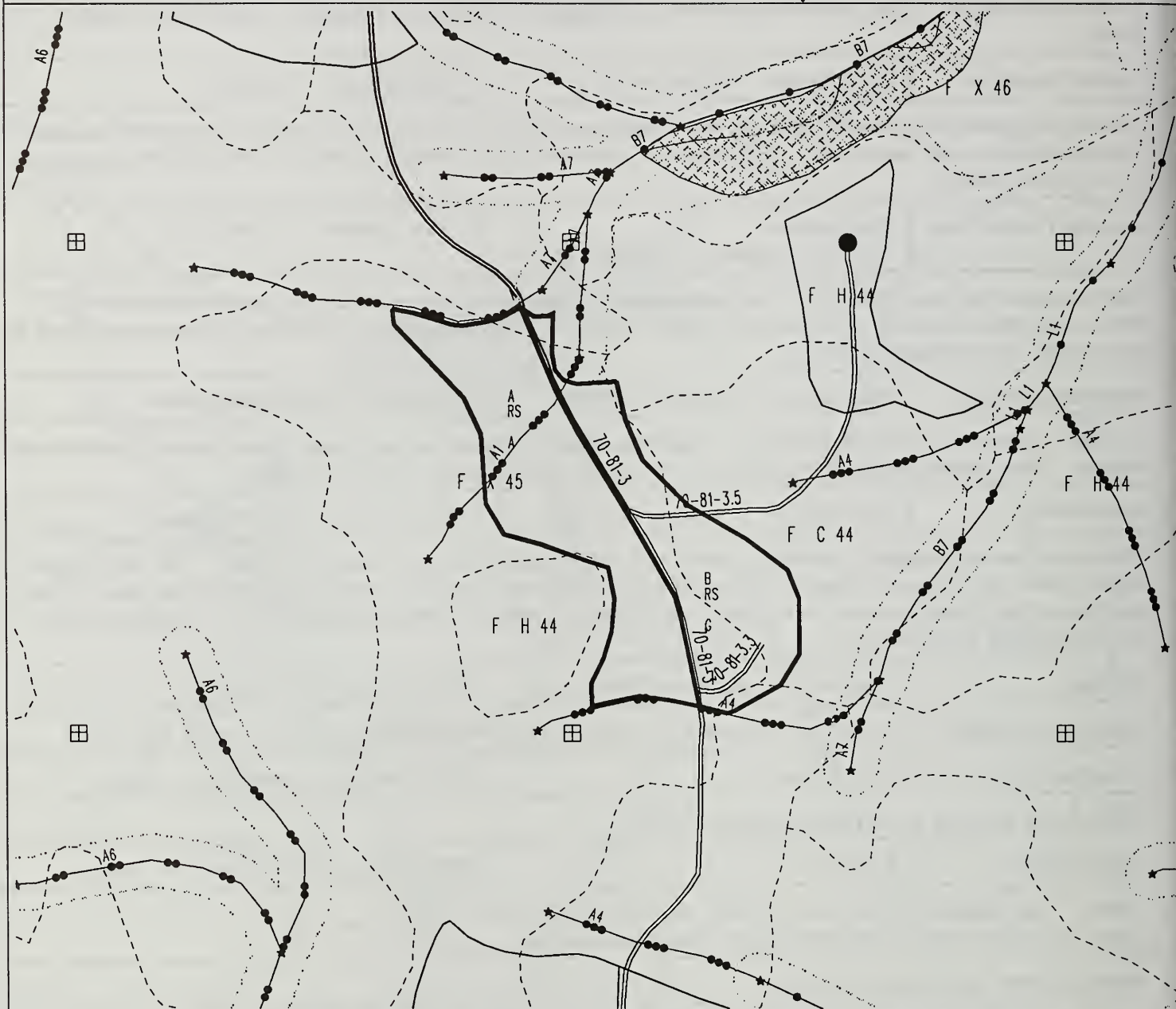
May 13, 1994



















CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

| | | | |
|---|---|---|-------------------------|
| VCU #: 574 | UNIT #: 425 | QUARTER QUAD: D3SW | PHOTO YR/#: 1991/990-51 |
| ACRES: 18.8 | VOL.: 472.8 MBF | LOGGING SYSTEM: Running Skyline/70' Tower | |
| LANDSCAPE ZONE: Unit is within second 1/4 mile of Thorne River scenic corridor and within proposed Honker Block. | | | |
| Timber/Vegetation | Field Review: J. Miller, 8/11/93 | Office Review: J. Goering | |
| Species composition predominantly hemlock but includes some spruce and cedar. Regeneration predominantly hemlock but includes a few cedar and spruce. Light amount of mistletoe infection evident in canopy. Low to moderate amounts of stem decay evident. | | | |
| Logging/Transportation | Field Review: J. Doyal/J. Herzberg/T. Hoshall, 8/19/93 | Office Review: E. Urstadt | |
| Unit is accessed by Road #70-81-3.5. The recommended logging system (for partial cut) is a slackline system with a tower. One hundred percent of the yarding is uphill. The north edge of the unit has a 150 foot buffer measured from the slope break. The economics are good. | | | |
| Watershed/Fisheries | Field Review: J. Metzler, 8/04/93 | Office Review: G. McNaughton | |
| A Class I stream is located north of the unit. Numerous landslides within the inner gorge deliver sediment directly to the channel. Class I stream located adjacent to northwest corner of unit requires 100' no-cut buffer. | | | |
| Soils/Geology | Field Review: J. Metzler, 8/04/93 | Office Review: G. McNaughton | |
| Three recent and six vegetated landslides. Initiate on blue/grey clay in the inner gorge of Stream 1. This area is highly unstable below the topographic break. The unit boundary should be located 150' south of the topographic break so that a windfirm buffer of trees is retained along the break. Winds are from the south - thus the need for a wide buffer. Trees are not especially tall in this area. | | | |
| Wildlife | Field Review: H. Sloan, 8/04/93 | Office Review: C. Confer | |
| Level I snag retention. Deer and bear scat and digs. Butterfly Lake 1/2 mile north. Area is currently unharvested. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit not seen from any priority travel route or use area | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Boundary pulled back 150 feet from Class I stream buffer on north boundry of unit to avoid destabililizing slopes within stream. Shelterwood cut (Type G) leaving all spruce and cedar if practical to enhance those species presence in the stand, to reduce mistletoe, and to help maintain structure. Root rot pocket near center of unit should be reviewed for possible group selection to reduce infection. Shelterwood leave trees should be managed with resultant second growth to help maintain structure. Mitigation measures for this unit are as follows: F1, F5, F7, F8, F10, and W2. | | | |

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

QUAD : D3-SW



- | | | | |
|---|---|---|-----------------------------|
|  | Revised Control Lake Project Boundary |  | Lakes and Ponds |
|  | Post-Field Unit Boundary w/ Setting Codes |  | Second Growth Units |
|  | Other Post-Field Unit Boundaries |  | MMI 4 |
|  | USFS Timber Types for Volc 4-7 |  | McGilvery > 41 |
|  | Eagle Tree Buffer of 330ft |  | Landings |
|  | Existing & Rebuilt Roads |  | Stream & Lake NoCUT Buffers |
|  | F.S. Roads Under Construction | | |
|  | Post-Field Proposed Roads | | |
|  | Ahmu-Class 1 & Stream Chantypes | | |
|  | Ahmu-Class 2 & Stream Chantypes | | |
|  | Ahmu-Class 3 & Stream Chantypes | | |
|  | Channel Type Change | | |

.5 MILE

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

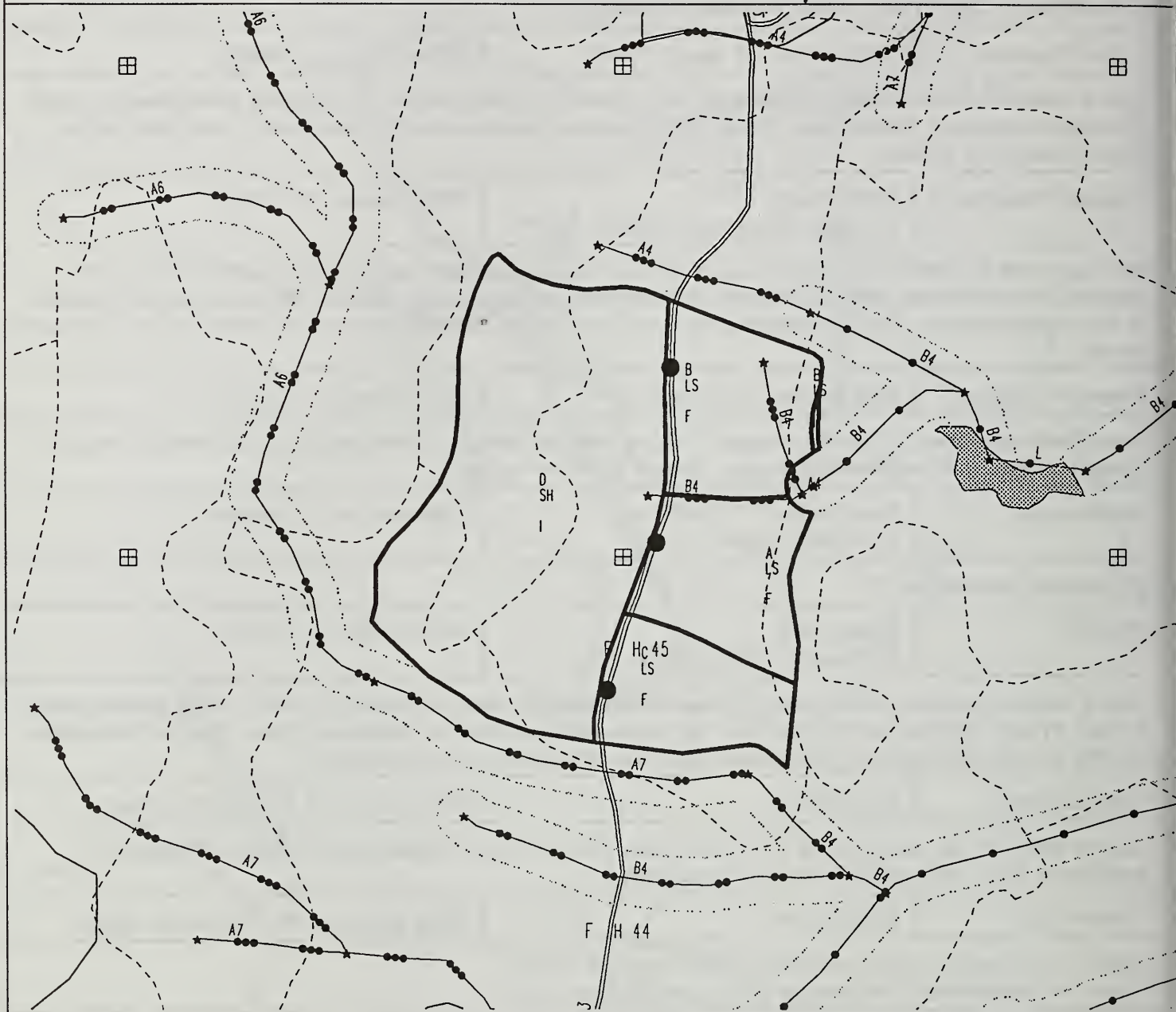
| | | | |
|--|---|---|-------------------------|
| VCU #: 574 | UNIT #: 426 | QUARTER QUAD: D3SW | PHOTO YR/#: 1991/990-51 |
| ACRES: 25.6 | VOL.: 559.9 MBF | LOGGING SYSTEM: Swingyarder/Running Skyline | |
| LANDSCAPE ZONE: Unit is within proposed Honker Block. | | | |
| Timber/Vegetation | Field Review: G. Hedin, 8/6/93 | Office Review: J. Goering | |
| Species composition predominantly hemlock and cedar with a few spruce present. Regeneration predominantly hemlock with a few spruce but is lacking cedar. Fairly dense understory vegetation and thick duff layer. Rock bluffs on the higher elevations of the unit. | | | |
| Logging/Transportation | Field Review: J. Doyal/J. Herzberg/D. Keister, 8/09/93 | Office Review: M. Whitty | |
| Unit is accessed by Road #70-81-3 and a spur 70-81-3.3. The recommended logging system is 70 foot tower with slackline. Sixty percent of yarding is downhill with 700 foot maximum yarding distance. Blowdown may be a problem on the western boundary. The unit boundary was moved east (below) the bluffs near the SW portion of unit. Economics are fair. | | | |
| Watershed/Fisheries | Field Review: H. Sloan, 7/22/93 | Office Review: T. Stewart | |
| Lower portion of Stream 1 (Class III, flagged O/W) requires split yarding. Upper portion is of no concern. Stream 2 (Class III flagged O/W) requires split yarding. Stream 3 is of no concern. | | | |
| Soils/Geology | Field Review: H. Sloan/D. Crowe, 7/22/93 | Office Review: T. Stewart | |
| No concerns, stable soils. | | | |
| Wildlife | Field Review: H. Sloan/D. Crowe, 7/22/93 | Office Review: C. Confer | |
| Level 1 structure retention. Leave large snags and non-merchantable trees on boundary of unit. Good goshawk habitat in center of unit. Goshawk survey conducted - no detections. Deer observed, high level of use. Wolf kill documented and bear scat and digs observed. Large unharvested area with high natural fragmentation. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit not seen from any priority travel route or use area. Area is scenic viewshed, but not visible. Maximum modification VQO. Not seen from Honker Canoe Route. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Upper portion (west) of unit with downhill yarding will be Type A clearcut. Selective cutting not feasible across entire unit due to lack of suspension and downhill yarding. Lower portion of unit should have shelterwood cutting (Type G) leaving any spruce and cedar to promote their regeneration and to maintain structure. Leave trees will be managed with second growth for increased structure, and also allow opportunity for small sales of specialty wood. Class II stream in northeast portion of unit requires 100' buffer. Split yard Class III stream in north portion of unit. Where access roads might be visible from priority travel routes mitigation measures such as minimizing road width, no sidecasting, leaving screening trees, and planting grass, shrubs, or trees may be necessary. Mitigation measures are: F5, F6, F8, F10, W2, and W5. | | | |

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

VCU : 574

UNIT : 427

QUAD : D3-SW



- Revised Control Lake Project Boundary
- Post-Field Unit Boundary w/ Setting Codes
- Other Post-Field Unit Boundaries
- USFS Timber Types for Volc 4-7
- Eagle Tree Buffer of 330ft
- Existing & Rebuilt Roads
- F.S. Roads Under Construction
- Post-Field Proposed Roads
- Ahmu-Class 1 & Stream Chantypes
- Ahmu-Class 2 & Stream Chantypes
- Ahmu-Class 3 & Stream Chantypes
- Channel Type Change

- Lakes and Ponds
- Second Growth Units
- MMI 4
- McGilvery > 41
- Landings
- Stream & Lake NoCUT Buffers

.5 MILE

August 03, 1994

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

| | | | |
|---|---|--|-------------------------|
| VCU #: 574 | UNIT #: 427 | QUARTER QUAD: D3SW | PHOTO YR/#: 1991/990-50 |
| ACRES: 62.0 | VOL.: 1184.1 MBF | LOGGING SYSTEM: Shovel, Highlead, probably running or live skyline, with small tower | |
| LANDSCAPE ZONE: Unit is in proposed Honker Block. | | | |
| Timber/Vegetation | Field Review: G. Hedin, 8/5/93 | Office Review: J. Goering | |
| Species composition predominantly hemlock and cedar with a few spruce present. Regeneration predominantly hemlock but includes some spruce and a few cedar. Rock bluffs on the higher elevations of the unit. | | | |
| Logging/Transportation | Field Review: J. Doyal/J. Herzberg/J. Graves | Office Review: J. Doyal/E. Urstadt | |
| Unit is accessed by Road #71-80-3. During IDT review, the unit was enlarged to the west. This new area has gentle topography and data suggests shovel logging is feasible. Also, a better road location appears to be west and above the present road. This location would access the shovel setting, increase deflection to east, and be a more stable road location. This must be analyzed during final layout. The shovel logging in the visual concern area will meet VQO if partial cut. The north and south boundaries have blowdown potential and a nonmerch buffer could help alleviate this. Economics are good. | | | |
| Watershed/Fisheries | Field Review: S. Tanguay, 7/13/93 | Office Review: T. Stewart | |
| Some streams not readily apparent in this area. Most are small muskeg channels. They do flow into the nearby lake and must be split yarded. Stream 3 not found. Class II stream adjacent to south boundary 100' no-cut buffer. | | | |
| Soils/Geology | Field Review: S. Tanguay, 7/13/93 | Office Review: T. Stewart | |
| No concerns; low gradients, fairly well drained, wet in spots. | | | |
| Wildlife | Field Review: C. Confer, 7/13/93 | Office Review: C. Confer | |
| Level I structure retention. Good wildlife habitat. Bear observed; deer, bear, and wolf sign observed. Surveyed for goshawk - no response. Surveyed for murrelets - no occupancy; fly-over documented. Muskegs on east and west boundaries (large complexes). Maintain cover along muskegs. Large unharvested area with high natural fragmentation. Lake Galea is approximately 1/2 mile east. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Not seen from Honker Canoe Route. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| When laying out final unit extend unit boundary west to include original unit boundary. Keep most windfirm trees in partial retention area. Relocate road to upper slope break. Shovel yard upper portion. Single tree/group selection (Type I) leaving some trees up to 26" DBH to meet Retention VQO. Type F seed tree cut in unseen area. Where access roads might be visible from priority travel routes mitigation measures such as minimizing road width, no sidecasting, leaving screening trees, and planting grass, shrubs, or trees may be necessary. Mitigation measures for this unit are as follows: F5, F6, F8, V1, V2, and W2. | | | |

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

VCU : 574

UNIT : 428

QUAD : D3-SW



- Revised Control Lake Project Boundary
- Post-Field Unit Boundary w/ Setting Codes
- Other Post-Field Unit Boundaries
- USFS Timber Types for Volc 4-7
- Eagle Tree Buffer of 330ft
- Existing & Rebuilt Roads
- F.S. Roads Under Construction
- Post-Field Proposed Roads
- Ahmu-Class 1 & Stream Chantypes
- Ahmu-Class 2 & Stream Chantypes
- Ahmu-Class 3 & Stream Chantypes
- Channel Type Change

- Lakes and Ponds
- Second Growth Units
- MMI 4
- McGilvery > 41
- Landings
- Stream & Lake NoCUT Buffers

May 13, 1994

.5 MILE

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

| | | | |
|--|--|---|-------------------------|
| VCU #: 574 | UNIT #: 428 | QUARTER QUAD: D3SW | PHOTO YR/#: 1991/990-50 |
| ACRES: 16.5 | VOL.: 177.4 MBF | LOGGING SYSTEM: Shovel | |
| LANDSCAPE ZONE: Unit is within proposed Honker Block. | | | |
| Timber/Vegetation | Field Review: M. Case | Office Review: J. Goering | |
| Species composition predominantly cedar with hemlock and shore pine. Little spruce is present. Regeneration predominantly hemlock and cedar but includes some shore pine and a few spruce. Low volume, mixed-species, multi-canopy stand with <50% canopy closure and low site productivity. Very wet and thin soils, many muskeg incursions within the unit. Fairly dense understory vegetation. Questionable timber volume (8,000 bf/ac) with significant amounts of shore pine and scrub present. Consider removing unit from unit pool due to low quality timber, low site productivity and economic costs of harvest. | | | |
| Logging/Transportation | Field Review: S. Field/B. Flatz, 8/04/93 | Office Review: M. Whitty/E. Urstadt | |
| This unit is accessed by Road #70-81-3.1. The entire unit can be shovel logged. Partial cutting good patches of timber is an alternative to clear cutting. The economics are fair to poor. | | | |
| Watershed/Fisheries | Field Review: S. Tanguay, 7/13/93 | Office Review: T. Stewart | |
| Stream 1 flagged O/W. This should be used as the northern unit boundary. If fork of this stream is found in unit, flag O/W, split yard, directional fall. Two Class III streams in center of unit require split yard and directional fall. They disappear into a muskeg before reaching the small lake. | | | |
| Soils/Geology | Field Review: S. Tanguay, 7/13/93 | Office Review: T. Stewart | |
| No concerns, mainly muskeg soils. | | | |
| Wildlife | Field Review: S. Tanguay, 7/13/93 | Office Review: M. Hall | |
| High use area for wildlife, potential corridor connector etc. Check this area out as a leave area, poor timber area. Muskegs throughout central portion of unit. Marten sighted between Units 427 and 428; very possible denning log or nest site. High to moderate bear/deer sign. Very wet site. Level 1 structure retention. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Road north of unit should be visible from Lake Galea and will not meet the Retention VQO. Unit is not seen. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Overstory removal (Type E) of trees 16" DBH and greater in bulk of unit. Selective cutting required in bottom of unit within 200 to 500 feet of Class I lake. Partial cut these trees in patches approximately 1 acre off of yarding corridors to allow operability of shovel logging. Class I stream along eastern boundary requires a 100 foot no-cut plus 50 foot selective cut buffer. Split yard Class III streams in unit. Mitigation measures for this unit are as follows: F5, F6, F8, W2, and W11. | | | |

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

VCU : 574

UNIT : 429

QUAD : D3-SW



- Revised Control Lake Project Boundary
- Post-Field Unit Boundary w/ Setting Codes
- Other Post-Field Unit Boundaries
- USFS Timber Types for Volc 4-7
- Eagle Tree Buffer of 330ft
- Existing & Rebuilt Roads
- F.S. Roads Under Construction
- Post-Field Proposed Roads
- Ahmu-Class 1 & Stream Chantypes
- Ahmu-Class 2 & Stream Chantypes
- Ahmu-Class 3 & Stream Chantypes
- Channel Type Change

- Lakes and Ponds
- Second Growth Units
- MMI 4
- McGilvery > 41
- Landings
- Stream & Lake NoCUT Buffers

August 03, 1994

.5 MILE

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

| | | | |
|--|------------------------------------|---|-------------------------|
| VCU #: 574 | UNIT #: 429 | QUARTER QUAD: D3SW | PHOTO YR/#: 1991/990-88 |
| ACRES: 46.7 | VOL.: 1692.2 MBF | LOGGING SYSTEM: Highlead | |
| LANDSCAPE ZONE: Unit is within proposed Honker Block. | | | |
| Timber/Vegetation | Field Review: T. Stecher, 7/14/93 | Office Review: J. Goering | |
| Species composition predominantly hemlock but includes cedar and some spruce. Regeneration predominantly hemlock but includes a few cedar and spruce. Rock bluffs on the higher elevations of the unit. Steep slope, thin soils. | | | |
| Logging/Transportation | Field Review: T. Wetzel/G. Slawson | Office Review: J. Doyal/E. Urstadt | |
| Unit is accessed by Road #70-82-20. The recommended harvest system is 100% downhill using highlead and 100 foot tower. Partial suspension can be achieved using a slackline system. Western boundary is flagged below bluffs. Maximum yarding distance is 1300 feet. Economics are good. Need to check feasibility of lowering western boundary to 650 feet elevation (as per IDT) during final layout. | | | |
| Watershed/Fisheries | Field Review: B. Romey, 6/19/93 | Office Review: G. McNaughton | |
| 100' buffer on Class I stream southeast of unit. | | | |
| Soils/Geology | Field Review: M. Minnillo, 6/19/93 | Office Review: G. McNaughton | |
| 65% to 75% slopes. Rock bluff at 600' to 700' elevation. Maintain western unit boundary before bluffs/McGilvery area. Drop unit or helicopter log trees above 700'. | | | |
| Wildlife | Field Review: M. Minnillo, 6/19/93 | Office Review: C. Confer | |
| Level 1 structure retention. Keep eastern unit boundary up out of muskeg to maintain some cover along muskeg. High use deer area. Bear and woodpecker sign observed. No previous harvest in this VCU; high natural fragmentation. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Keep below 650' due to visibility from Lake Galea. Not seen from Honker Canoe Route. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| West unit boundary lowered to avoid bluffs and McGilvery soil areas. Keep unit upper boundary below 650' elevation for soil and visual concerns. Partial cutting is not feasible due to 100% downhill yarding. Type A and Type D clearcut leaving two islands by not harvesting between the landings. Maintain 100' buffer on Class I stream near southeast tip. Mitigation measures for this unit are as follows: F1, F5, F8, F10, V1, W1 and W5. | | | |

NO UNIT MAP
UNIT DROPPED OR DEFERRED

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

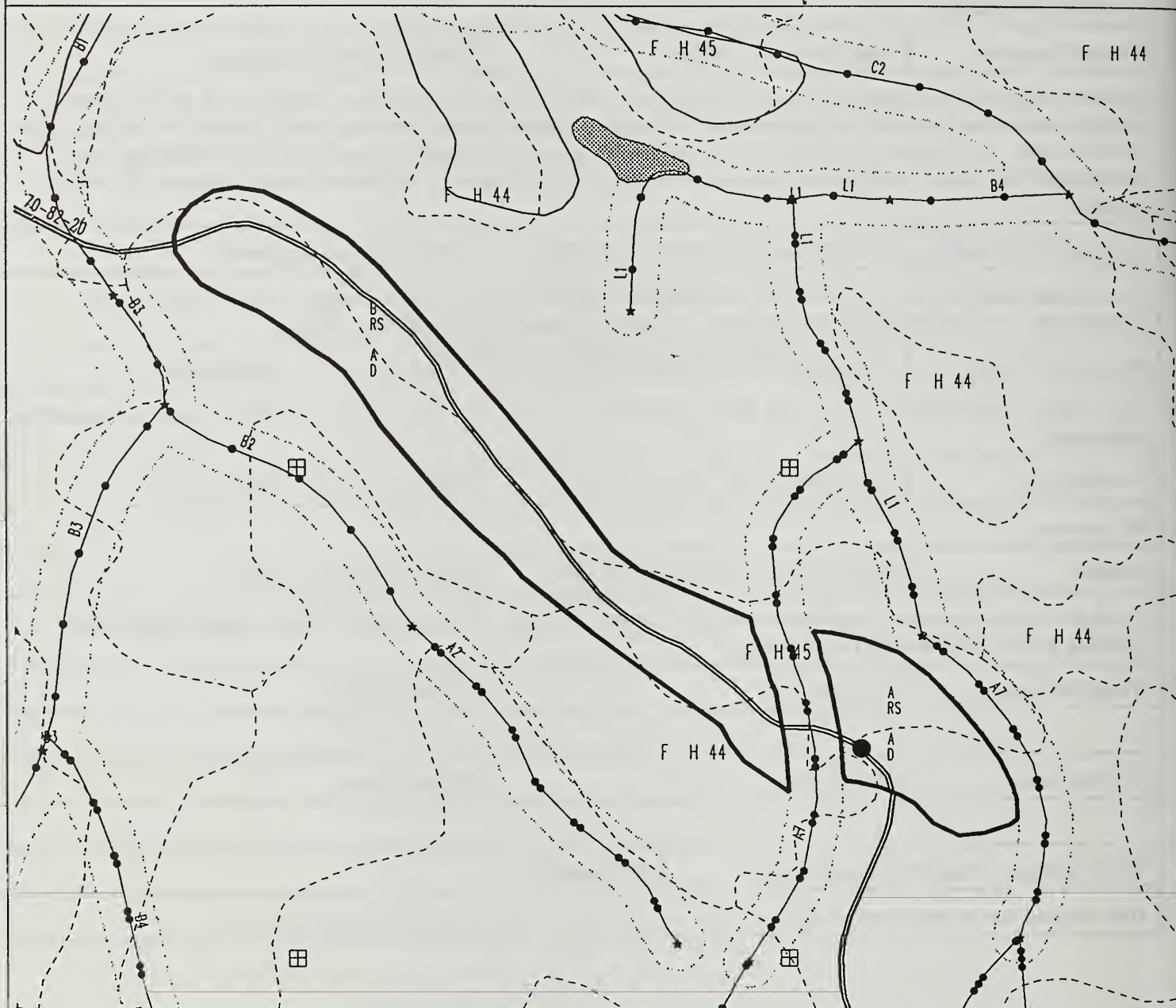
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|---|--------------------------------------|------------------------------|-------------------------|
| VCU #: 574 | UNIT #: 430 | QUARTER QUAD: D3SW | PHOTO YR/#: 1991/990-46 |
| ACRES: | VOL.: | LOGGING SYSTEM: | |
| LANDSCAPE ZONE: | | | |
| Timber/Vegetation | Field Review: J. Miller | Office Review: J. Goering | |
| Species composition predominantly hemlock with some cedar. Few spruce are present. Regeneration predominantly hemlock with a few spruce but is lacking cedar. Muskeg incursions incorporated with mixed species, low volume timber in some areas. Light amount of mistletoe infection evident in canopy. Many streams, and poor soil drainage areas. Moderately low volume, multi-canopy stand with < 50% canopy closure. Merchantable timber is located in isolated patches. | | | |
| Logging/Transportation | Field Review: B. Wilkinson/T. Wetzel | Office Review: E. Urstadt | |
| Four streams and two lakes are in and around this unit. The buffers did not leave enough volume to justify road construction. Logging would be very difficult. Recommend dropping this unit from unit pool. | | | |
| Watershed/Fisheries | Field Review: B. Romey, 6/19/93 | Office Review: G. McNaughton | |
| 100' buffer on all streams except Stream 4 which needs an additional 100' selective harvest buffer. Based on Forest Plan Guidelines. | | | |
| Soils/Geology | Field Review: M. Minnillo, 6/19/93 | Office Review: G. McNaughton | |
| No concerns. | | | |
| Wildlife | Field Review: M. Minnillo, 6/19/93 | Office Review: C. Confer | |
| Level 1 structure retention. Small lakes and Class I stream to north. Deer observed. Unit is in large area with no previous harvest; high natural fragmentation. | | | |
| Visual/Recreation | Field Review: | Office Review: | |
| | | | |
| Cultural/Lands | Field Review: | Office Review: | |
| | | | |
| Interdisciplinary Team Recommendations | | Reviewed By: | |
| Unit dropped due to small area of CFL. | | | |

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

VCU : 574

UNIT : 431

QUAD : D3-SW



- Revised Control Lake Project Boundary
- Post-Field Unit Boundary w/ Setting Codes
- Other Post-Field Unit Boundaries
- USFS Timber Types for Volc 4-7
- Eagle Tree Buffer of 330ft
- Existing & Rebuilt Roads
- F.S. Roads Under Construction
- Post-Field Proposed Roads
- Ahmu-Class 1 & Stream Chantypes
- Ahmu-Class 2 & Stream Chantypes
- Ahmu-Class 3 & Stream Chantypes
- Channel Type Change

- Lakes and Ponds
- Second Growth Units
- MMI 4
- McGilvery > 41
- Landings
- Stream & Lake NoCUT Buffers

June 09, 1994

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

| | | | |
|--|---|---|-------------------------|
| VCU #: 574 | UNIT #: 431 | QUARTER QUAD: D3SW | PHOTO YR/#: 1991/990-87 |
| ACRES: 37.5 | VOL.: 1356.4 MBF | LOGGING SYSTEM: Swingyarder/Running Skyline | |
| LANDSCAPE ZONE: Unit is in proposed Honker block. | | | |
| Timber/Vegetation | Field Review: T. Stecher, 6/21/93 | Office Review: J. Goering | |
| Species composition predominantly hemlock with some cedar. Few spruce are present. Regeneration predominantly hemlock with a few spruce but is lacking cedar. Low to moderate amounts of mistletoe infection evident in canopy. Windthrow damage evident in portions of the unit. Low to moderate amounts of root rot associated with windthrow. | | | |
| Logging/Transportation | Field Review: B. Wilkinson/T. Wetzel, 6/30/93 | Office Review: M. Whitty | |
| Recommend swingyarder 50% uphill with maximum yarding distance of approximately 350' for western end of unit. Fair unit economically. | | | |
| Watershed/Fisheries | Field Review: B. Romey, 6/20/93 | Office Review: G. McNaughton | |
| Streams 1, 2, and 3 need 100' buffers. | | | |
| Soils/Geology | Field Review: M. Minnillo, 6/20/93 | Office Review: G. McNaughton | |
| No concerns; low, stable slopes. | | | |
| Wildlife | Field Review: M. Minnillo, 6/20/93 | Office Review: C. Confer | |
| Active bear den in central portion of unit. Obvious signs of long-term use. High deer use. Two sharp-shinned hawks observed in the northern portion of unit. Plucking post also observed in this area. Unit is in a large area with no previous harvest; high natural fragmentation. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit not seen from any priority travel route or use area. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Leave a block approximately 3 acres extending from stream buffer in east portion of unit for future small sales of specialty wood. Ensure this block is well east of identified mistletoe and root rot area near stand exam plot #6. Type A clearcut throughout most of unit due to mistletoe, root rot, and windthrow. Maintain 100' buffer on all streams. Mitigation measures for this unit are as follows: F5, F8, F10, W1 and W5. | | | |

NO UNIT MAP
UNIT DROPPED OR DEFERRED

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

| | | | |
|---|------------------------------------|---|-------------------------|
| VCU #: 574 | UNIT #: 432 | QUARTER QUAD: D3SW | PHOTO YR/#: 1991/990-87 |
| ACRES: | VOL.: | LOGGING SYSTEM: | |
| LANDSCAPE ZONE: | | | |
| Timber/Vegetation | Field Review: S. Karstens | Office Review: J. Goering | |
| Species composition predominantly hemlock with some cedar. Few spruce are present. Regeneration mostly on nurse logs and consisted of hemlock. Lacking spruce and western red cedar regeneration. Muskeg inclusions within the unit. Windthrow damage present in southeast portion of unit. | | | |
| Logging/Transportation | Field Review: B. Wilkinson | Office Review: E. Urstadt | |
| The required buffers on the north and east sides leave about two to three truck loads of poor quality timber in unit. Recommend dropping unit from unit pool. | | | |
| Watershed/Fisheries | Field Review: B. Romey, 6/16/93 | Office Review: G. McNaughton | |
| Stream 1 needs 100' buffer with an additional 100' no programmed harvest buffer. Stream 2 needs 100' buffer. | | | |
| Soils/Geology | Field Review: B. Romey, 6/16/93 | Office Review: G. McNaughton | |
| No concerns. | | | |
| Wildlife | Field Review: M. Minnillo, 7/16/93 | Office Review: C. Confer | |
| Potential wolf den in the northwest corner of unit. High wolf signs throughout unit; possible wolf den in area. Also high bear activity. Recommend eagle nest survey along Class I stream on north side at unit prior to harvest. Structure retention Level 1. Sapsucker observed. No previous harvest in area; high natural fragmentation. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit not seen from any priority travel route or use area. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Unit dropped due to small area of CFL. | | | |

NO UNIT MAP
UNIT DROPPED OR DEFERRED

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

| | | | |
|---|------------------------------------|---|-------------------------|
| VCU #: 574 | UNIT #: 433 | QUARTER QUAD: D3SW | PHOTO YR/#: 1991/990-87 |
| ACRES: | VOL.: | LOGGING SYSTEM: | |
| LANDSCAPE ZONE: | | | |
| Timber/Vegetation | Field Review: T. Stecher | Office Review: J. Goering | |
| Species composition predominantly hemlock but includes cedar and some spruce. Regeneration mostly on nurse logs and consists of hemlock and some spruce. Low to moderate amounts of stem decay evident in hemlock. Muskeg inclusions within the unit. | | | |
| Logging/Transportation | Field Review: B. Wilkinson | Office Review: E. Urstadt | |
| The required buffers left a small volume of poor quality wood. Recommend dropping unit. | | | |
| Watershed/Fisheries | Field Review: B. Romey, 6/16/93 | Office Review: G. McNaughton | |
| 100' foot buffers on streams 1 and 2. | | | |
| Soils/Geology | Field Review: B. Romey, 6/16/93 | Office Review: G. McNaughton | |
| Flat, no unstable soils (no concerns). | | | |
| Wildlife | Field Review: M. Minnillo, 6/16/93 | Office Review: C. Confer | |
| Wolf activity evident in area. Level 1 structure retention. See Unit Card #574-433. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit not seen from any priority travel route or use area. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | Reviewed By: | |
| Unit dropped due to small area of CFL. | | | |

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

VCU : 574

UNIT : 434

QUAD : D3-SW



- Revised Control Lake Project Boundary
- Post-Field Unit Boundary w/ Setting Codes
- Other Post-Field Unit Boundaries
- USFS Timber Types for Volc 4-7
- Eagle Tree Buffer of 330ft
- Existing & Rebuilt Roads
- F.S. Roads Under Construction
- Post-Field Proposed Roads
- Ahmu-Class 1 & Stream Chantypes
- Ahmu-Class 2 & Stream Chantypes
- Ahmu-Class 3 & Stream Chantypes
- Channel Type Change

- Lakes and Ponds
- Second Growth Units
- MMI 4
- McGilvery > 41
- Landings
- Stream & Lake NoCUT Buffers

March 17, 1995

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

| | | | |
|---|--|---|--------------------------|
| VCU #: 574 | UNIT #: 434 | QUARTER QUAD: D3SW | PHOTO YR/#: 1991/690-167 |
| ACRES: 61.8 | VOL.: 2128.6 MBF | LOGGING SYSTEM: Highlead with 70' Tower | |
| LANDSCAPE ZONE: Unit is within the Honker Divide watershed. | | | |
| Timber/Vegetation | Field Review: S. Karstens, 8/19/93 | Office Review: J. Goering | |
| Species composition predominantly hemlock but includes cedar and some spruce. Regeneration predominantly hemlock but includes a few cedar and spruce. Light amount of mistletoe infection evident in canopy. Many small streams and poor soil drainage areas. Steep, rocky, and shallow soils. Salmonberry present throughout. | | | |
| Logging/Transportation | Field Review: K. Martin/B. Flatz, 8/20/93 | Office Review: M. Whitty | |
| Unit is accessed by Road #69-82-32.5. The recommended logging system is highlead with a 70 foot tower. Soils specialists noted a large alluvial fan which was deleted from cable logging unit. Helicopter logging would be economical on the alluvial fan, if allowed. Since engineers did not find unstable slopes above 1000 feet, the unit was laid out below 1200 feet because of visual considerations. Consider "feathering" unit edges to minimize blowdown potential. Economics are fair. | | | |
| Watershed/Fisheries | Field Review: R. Rogers, 7/26/93 | Office Review: T. Stewart | |
| Streams 1 and 2 are Class I, 100' buffer. Streams 3, 4, and 6 are Class II, Type B5, 100' no cut, and 50' selective harvest TTRA buffer in lower flagged sections. Streams 5 and upper part of 3, 4, and 6 are Class III, directional fall, and split yard. | | | |
| Soils/Geology | Field Review: R. Rogers, 7/26/93 | Office Review: T. Stewart | |
| Avoid logging large unstable, active, alluvial fan which if disturbed will add sediment to Class I stream. Future channel avulsion (a common process on alluvial fans) would expose proposed harvest area, lacking in stabilizing vegetation or root structure, to direct stream erosion and would convey sediment into Class I stream. Lower unit boundary below 1,000' elevation due to unstable slope conditions resulting from thin, wet soils covering fractured bedrock. | | | |
| Wildlife | Field Review: A. Sullivan, 7/26/93 | Office Review: C. Confer | |
| Level 1 structure retention. Muskeg along southwest boundary. Maintain buffer on muskeg. Low wildlife use. Bear and deer sign/use evident. Previously unharvested area. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit not seen from any priority travel route or use area. Not seen from Honker Canoe Route. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Upper (north) unit boundary lowered to avoid unstable soils. Alluvial fan area in southern portion of unit deleted. Type A clearcut with 50' selective cut along 100' no-cut stream buffer in south central portion of unit. Split yard Class III streams in north and central portions of unit. Recommend regeneration survey to address possible problems with salmonberry. Mitigation measures for this unit are as follows: F1, F5, F6, F8, F10, and W5. | | | |

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

VCU : 574

UNIT : 435

QUAD : D3-SW



- Revised Control Lake Project Boundary
- Post-Field Unit Boundary w/ Setting Codes
- Other Post-Field Unit Boundaries
- USFS Timber Types for Volc 4-7
- Eagle Tree Buffer of 330ft
- Existing & Rebuilt Roads
- F.S. Roads Under Construction
- Post-Field Proposed Roads
- Ahmu-Class 1 & Stream Chantypes
- Ahmu-Class 2 & Stream Chantypes
- Ahmu-Class 3 & Stream Chantypes
- Channel Type Change

- Lakes and Ponds
- Second Growth Units
- MMI 4
- McGilvery > 41

- Landings
- Stream & Lake NoCUT Buffers

.5 MILE

August 08, 1994

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

| | | | |
|---|---|--|--------------------------|
| VCU #: 574 | UNIT #: 435 | QUARTER QUAD: D3SW | PHOTO YR/#: 1991/690-167 |
| ACRES: 30.0 | VOL.: 1132.3 MBF | LOGGING SYSTEM: Live Skyline, Shotgun/Slackline with 70' Tower | |
| LANDSCAPE ZONE: Unit is within Honker Divide watershed. | | | |
| Timber/Vegetation | Field Review: S. Karstens, 8/18/93 | Office Review: J. Goering | |
| Species composition predominantly hemlock and cedar with a few spruce present. Regeneration predominantly hemlock with a few spruce but is lacking cedar. Low to moderate amounts of mistletoe infection evident in canopy and regeneration. Many small streams, and some windthrow areas in the higher elevations. | | | |
| Logging/Transportation | Field Review: K. Martin/B. Flatz, 8/17/93 | Office Review: M. Whitty | |
| Recommend 70' tower with shotgun and slackline rigging. 50% uphill; maximum distance is approximately 900'. Partial suspension required. Partial suspension available in most of unit. The upper 200' of the northeast corner between two O/W streams may have to be dropped due to ground lead in this area. Medium blowdown potential - feather northwest and northeast boundary. Good economic feasibility. | | | |
| Watershed/Fisheries | Field Review: R. Rogers, 7/26/93 | Office Review: G. McNaughton | |
| Stream 1 is Class III, Type A3; needs 25' no programmed harvest buffer, plus additional 75' no-cut buffer to protect multiple channel courses. 100' total buffer on Stream 1. Stream 3 is Class I; needs 100' TTRA buffer. Stream 2 is Class III; directional fall. Stream 4 is Class III; directional fall and split yard. | | | |
| Soils/Geology | Field Review: R. Rogers, 7/26/93 | Office Review: G. McNaughton | |
| Partially suspend throughout unit due to soil instability. | | | |
| Wildlife | Field Review: A. Sullivan, 7/26/93 | Office Review: C. Confer | |
| Level 1 structure retention. Low wildlife use. Bear and deer sign evident. Large area of unharvested timber. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Keep below 1,200' due to visibility from Butterfly Lake. Not seen from Honker Canoe Route. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Upper unit boundary kept below 1,200' for visual considerations. Type A and D clearcut throughout unit due to prevalent mistletoe, windthrow, and large portion of unit with downhill yarding. Area between Streams 1 and 4 dropped due to buffer and difficulty of falling trees between these split yard streams. Retain for structure. Maintain 100' buffer on Class I stream southwest of unit, split yard all other streams in unit. Mitigation measures for this unit are as follows: F5, F6, F7, F8, F10, V1, W1 and W5. | | | |

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

VCU : 574

UNIT : 436

QUAD : D3-SW



- Revised Control Lake Project Boundary
- Post-Field Unit Boundary w/ Setting Codes
- Other Post-Field Unit Boundaries
- USFS Timber Types for Volc 4-7
- Eagle Tree Buffer of 330ft
- Existing & Rebuilt Roads
- F.S. Roads Under Construction
- Post-Field Proposed Roads
- Ahmu-Class 1 & Stream Chantypes
- Ahmu-Class 2 & Stream Chantypes
- Ahmu-Class 3 & Stream Chantypes
- Channel Type Change

- Lakes and Ponds
- Second Growth Units
- MMI 4
- McGilvery > 41
- Landings
- Stream & Lake NoCUT Buffers

March 17, 1995

.5 MILE

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

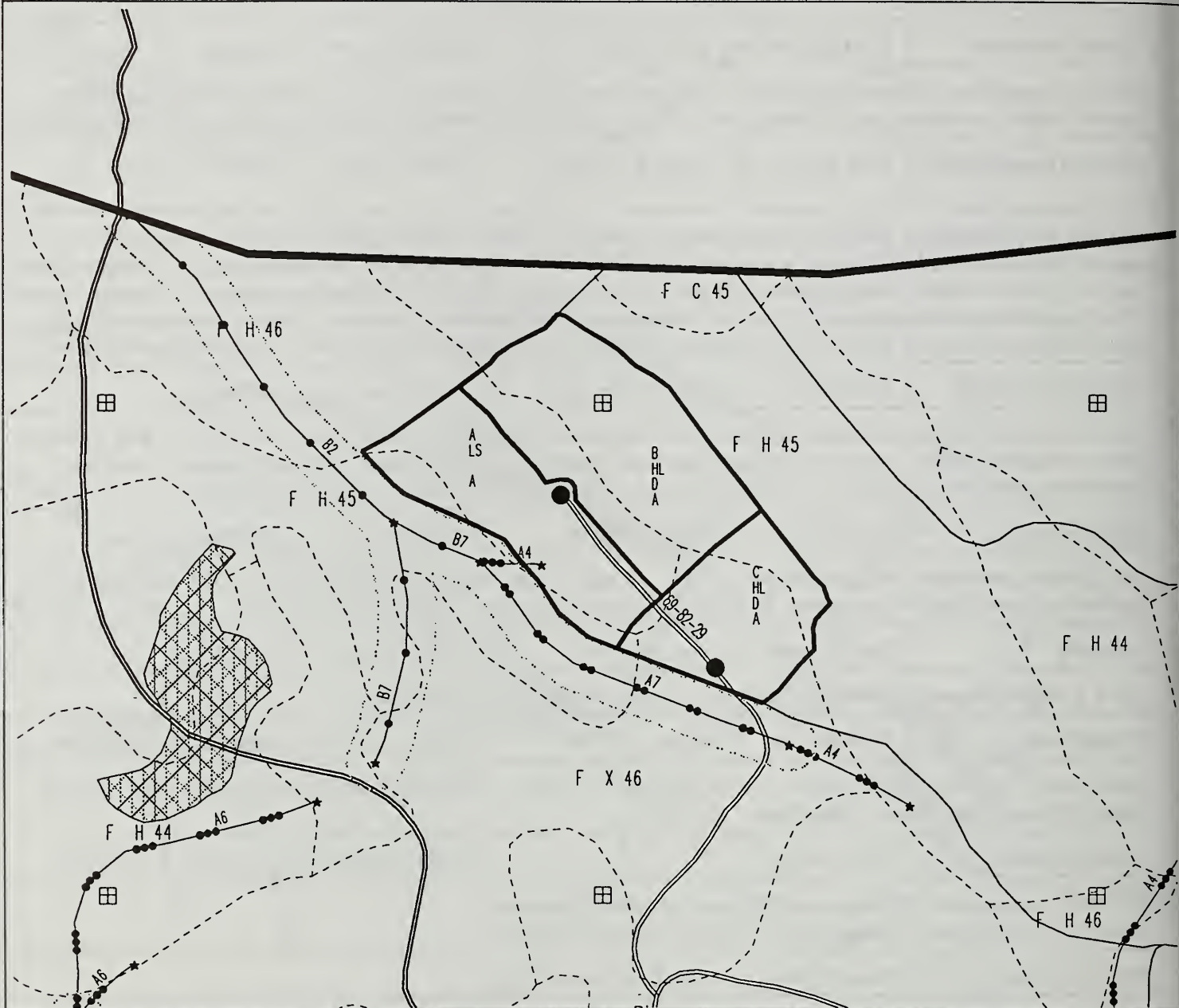
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|---|-----------------------------------|---|-------------------------|
| VCU #: 574 | UNIT #: 436 | QUARTER QUAD: D3SW | PHOTO YR/#: 1991/990-83 |
| ACRES: 30.6 | VOL.: 1169.1 MBF | LOGGING SYSTEM: Slackline System, Highlead with 70' Tower | |
| LANDSCAPE ZONE: Unit is within the Honker Divide watershed. | | | |
| Timber/Vegetation | Field Review: M. Case, 8/12/93 | Office Review: J. Goering | |
| Species composition predominantly hemlock with some cedar. Few spruce are present. Regeneration predominantly hemlock with a few spruce but is lacking cedar. Rocky, relatively shallow soils, and poor soil drainage areas within unit. | | | |
| Logging/Transportation | Field Review: K. Martin/B. Flatz | Office Review: J. Spolar/E. Urstadt | |
| The unit will be harvested from one landing using a medium (70') tower with highlead, live sky line, and slack line system. Maximum yarding distance is approximately 800' with 50% uphill and 50% downhill yarding. Shotgun system may work best for uphill yarding portion. Partial cut is not recommended due to blowdown potential. Possibly "feather" edges to solve blowdown potential. 75' to 100' buffer is along the southwest boundary. The top portion of the unit (above 900') was deferred due to visual concerns. This area can be helicopter partial cut. Economics are very good. | | | |
| Watershed/Fisheries | Field Review: J. Metzler, 8/04/93 | Office Review: A. Wolfson | |
| A Class III, shallow V-notch borders the unit on the west; some instability evident in the inner gorge, so keep boundary above topographic break. May want to create feathered edge with selective harvest along this boundary - moderate blowdown; winds from south. A Class IIa stream is located south of the unit, requires a 100' buffer. | | | |
| Soils/Geology | Field Review: J. Metzler, 8/04/93 | Office Review: A. Wolfson | |
| No instability below 900' elevation; slopes < 60%. Slopes increase abruptly to > 80% above 1,000' and there is evidence of small, shallow, past active landslides. Selectively log areas above 900' by helicopter. | | | |
| Wildlife | Field Review: H. Sloan, 8/04/93 | Office Review: C. Confer | |
| Level 1 structure retention. Deer and bear sign. Large previously unharvested area. | | | |
| Visual/Recreation | Field Review: J. Metzler, 8/04/93 | Office Review: S. Bedross, M. Greenig | |
| Lake Galea is visible at 1,000' elevation; so keep to line below 900'. Keep below 900' due to visibility from Butterfly Lake. Not seen from Honker Canoe Route. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | Reviewed By: | |
| Upper unit boundary kept below 900' elevation for visual concerns. Area above the unit is a potential helicopter log unit using partial cutting to meet Retention VQO. Type A clearcut. Partial cutting difficult due to 50% downhill highlead yarding, stability concerns, and blowdown potential. Maintain 100' buffer along Class II stream along southwest boundary, maintain west unit boundary away from topographic break. Mitigation measures for this unit are as follows: F1, F5, F6, F7, F8, F10, V1, and W5. | | | |

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

VCU : 574

UNIT : 437

QUAD : D3-SW



- Revised Control Lake Project Boundary
- Post-Field Unit Boundary w/ Setting Codes
- Other Post-Field Unit Boundaries
- USFS Timber Types for Volc 4-7
- Eagle Tree Buffer of 330ft
- Existing & Rebuilt Roads
- F.S. Roads Under Construction
- Post-Field Proposed Roads
- Ahmu-Class 1 & Stream Chantypes
- Ahmu-Class 2 & Stream Chantypes
- Ahmu-Class 3 & Stream Chantypes
- Channel Type Change

- Lakes and Ponds
- Second Growth Units
- MMI 4
- McGilvery > 41
- Landings
- Stream & Lake NoCUT Buffers

May 13, 1994

.5 MILE

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

| | | | |
|---|--|--|----------------------------|
| VCU #: 574 | UNIT #: 437 | QUARTER QUAD: D3SW | PHOTO YR/#: 1991/990-83-91 |
| ACRES: 33.7 | VOL.: 1016.2 MBF | LOGGING SYSTEM: Live Skyline System, Highlead with 70' Tower | |
| LANDSCAPE ZONE: Unit is within Honker Divide watershed. | | | |
| Timber/Vegetation | Field Review: M. Case, 8/10/93 | Office Review: J. Goering | |
| Species composition predominantly hemlock but includes some spruce and cedar. Regeneration predominantly hemlock with a few spruce but is lacking cedar. Moderate to high amounts of mistletoe infection evident in canopy. Light windthrow damage evident throughout the unit. Promote cedar regeneration through planting. | | | |
| Logging/Transportation | Field Review: K. Martin/B. Flatz, 8/09/93 | Office Review: M. Whitty | |
| Unit is accessed by Road #69-89-29. The recommended logging system is highlead down, 65%; live skyline (shotgun) uphill, 35%. Unit can be extended NW to the project boundary. The unit is too steep to partial cut using cable systems. The northeastern boundary was placed below 900 feet because of visibility from Lake Galea. Blowdown may be a problem; do not partial cut and consider feathering edges. A 100 foot stream buffer is along the SW boundary. Economics are good. | | | |
| Watershed/Fisheries | Field Review: J. Metzler, 8/04/93 | Office Review: T. Stewart | |
| A Class IIa stream is located south of the unit and requires a 100' buffer. There are no tributaries in the unit. | | | |
| Soils/Geology | Field Review: J. Metzler, 8/04/93 | Office Review: T. Stewart | |
| No special concerns below 1,000' elevation. Achieve full suspension and selectively harvest on high hazard soils above 1,000' elevation. | | | |
| Wildlife | Field Review: H. Sloan, 8/04/93 | Office Review: C. Confer | |
| Level I structure retention. Approximately 1/2 mile east of Butterfly Lake. Deer and bear sign observed. Large contiguous block of timber. Previous harvest north of unit. | | | |
| Visual/Recreation | Field Review: J. Metzler, 8/04/93 | Office Review: S. Bedross, M. Greenig | |
| Doesn't appear to be visible from lakes at 1,000' elevation (although the canopy is dense and I could not see too well). Keep top line below 1,000' elevation due to potential visibility from Butterfly Lake. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Upper unit boundary restricted to 830' elevation for visual and stability concerns. Area above unit could be a potential helicopter log unit using partial cutting to meet Retention VQO. Type A clearcut. Tailholds required in TTRA buffer. Splyard and directionally fall trees away from Class III stream that just enters unit on south boundary. Partial cutting not feasible due to highlead yarding (60% downhill), moderate to high mistletoe, and windthrow potential. Mitigation measures for this unit are as follows: F5, F6, F8, F10, V1, and W5. | | | |

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

VCU : 574

UNIT : 440

QUAD : D3-SW



- Revised Control Lake Project Boundary
- Post-Field Unit Boundary w/ Setting Codes
- Other Post-Field Unit Boundaries
- USFS Timber Types for Volc 4-7
- Eagle Tree Buffer of 330ft
- Existing & Rebuilt Roads
- F.S. Roads Under Construction
- Post-Field Proposed Roads
- Ahmu-Class 1 & Stream Chantypes
- Ahmu-Class 2 & Stream Chantypes
- Ahmu-Class 3 & Stream Chantypes
- Channel Type Change

- Lakes and Ponds
- Second Growth Units
- MMI 4
- McGilvery > 41
- Landings
- Stream & Lake NoCUT Buffers

.5 MILE

May 13, 1994

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

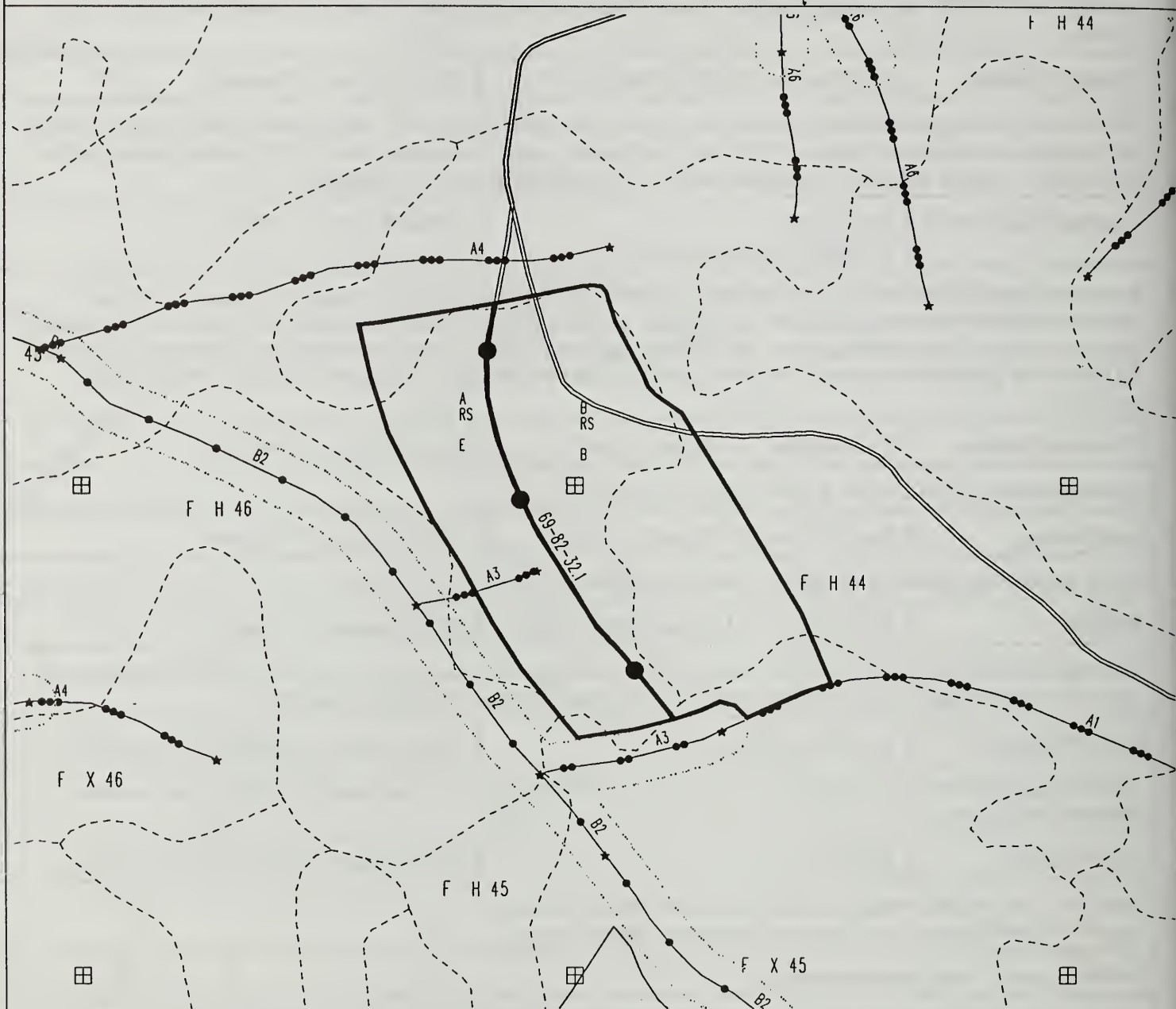
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|---|--|---|-------------------------|
| VCU #: 574 | UNIT #: 440 | QUARTER QUAD: D3SW | PHOTO YR/#: 1991/990-84 |
| ACRES: 45.0 | VOL.: 543.6 MBF | LOGGING SYSTEM: Swingyarder/Running Skyline | |
| LANDSCAPE ZONE: In proposed medium Honker Block and in the second 1/4 mile zone away from scenic river corridor. | | | |
| Timber/Vegetation | Field Review: J. Miller, 8/6/93 | Office Review: J. Goering | |
| Species composition predominantly hemlock but includes cedar and some spruce. Regeneration predominantly hemlock but includes a few cedar and spruce. Moderately low volume, multi-canopy stand with < 50% canopy closure in the south portion. Dense understory vegetation, and poor soil drainage areas in the south half. | | | |
| Logging/Transportation | Field Review: J. Doyal/J. Herzberg, 8/26/93 | Office Review: M. Whitty | |
| Recommend swingyarder with running skyline for northern settings where partial suspension is required. Partial suspension available in most of this area, but lift trees in the TTRA buffer may be required. Swingyarder with running skyline or highlead for remaining areas. 90% uphill; maximum distance is approximately 700'. Landing 3+30 (Road 5.1) may need guyline extensions. Consider feathering northwest boundary to mitigate blowdown. Fair economic feasibility. | | | |
| Watershed/Fisheries | Field Review: B. Romey, 7/26/93 | Office Review: T. Stewart | |
| Stream northeast of unit is Class I, B/W, 150' no-cut buffer. | | | |
| Soils/Geology | Field Review: M. Minnillo, 7/26/93 | Office Review: T. Stewart | |
| Partial suspension required in the north central steep portion of unit due to wet slopes. | | | |
| Wildlife | Field Review: M. Minnillo, 7/26/93 | Office Review: C. Confer | |
| Majority of wildlife sign observed in the northern portion of unit. Maintain larger snags and provide some higher use cover for deer and bear. Large contiguous block of old growth habitat. No previous harvest | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit not seen from any priority travel route or use area. Not visible if below the uppermost ridge. Not seen from Honker Canoe Route. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Type I harvest leaving wedge shaped groups along stream buffer, south, and northwest boundary. Achieve partial suspension from northern two landings. Upstream LI channel type only requires a 100' no cut buffer. Class I stream at northeast boundary requires 150 foot no harvest buffer. Mitigation measures for this unit are as follows: F1, F5, F8, F10, and W2. | | | |

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

VCU : 574

UNIT : 441

QUAD : D3-SW



- Revised Control Lake Project Boundary
- Post-Field Unit Boundary w/ Setting Codes
- Other Post-Field Unit Boundaries
- USFS Timber Types for Volc 4-7
- Eagle Tree Buffer of 330ft
- Existing & Rebuilt Roads
- F.S. Roads Under Construction
- Post-Field Proposed Roads
- Ahmu-Class 1 & Stream Chantypes
- Ahmu-Class 2 & Stream Chantypes
- Ahmu-Class 3 & Stream Chantypes
- Channel Type Change

- Lakes and Ponds
- Second Growth Units
- MMI 4
- McGilvery > 41

- Landings
- Stream & Lake NoCUT Buffers

June 09, 1994

.5 MILE

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

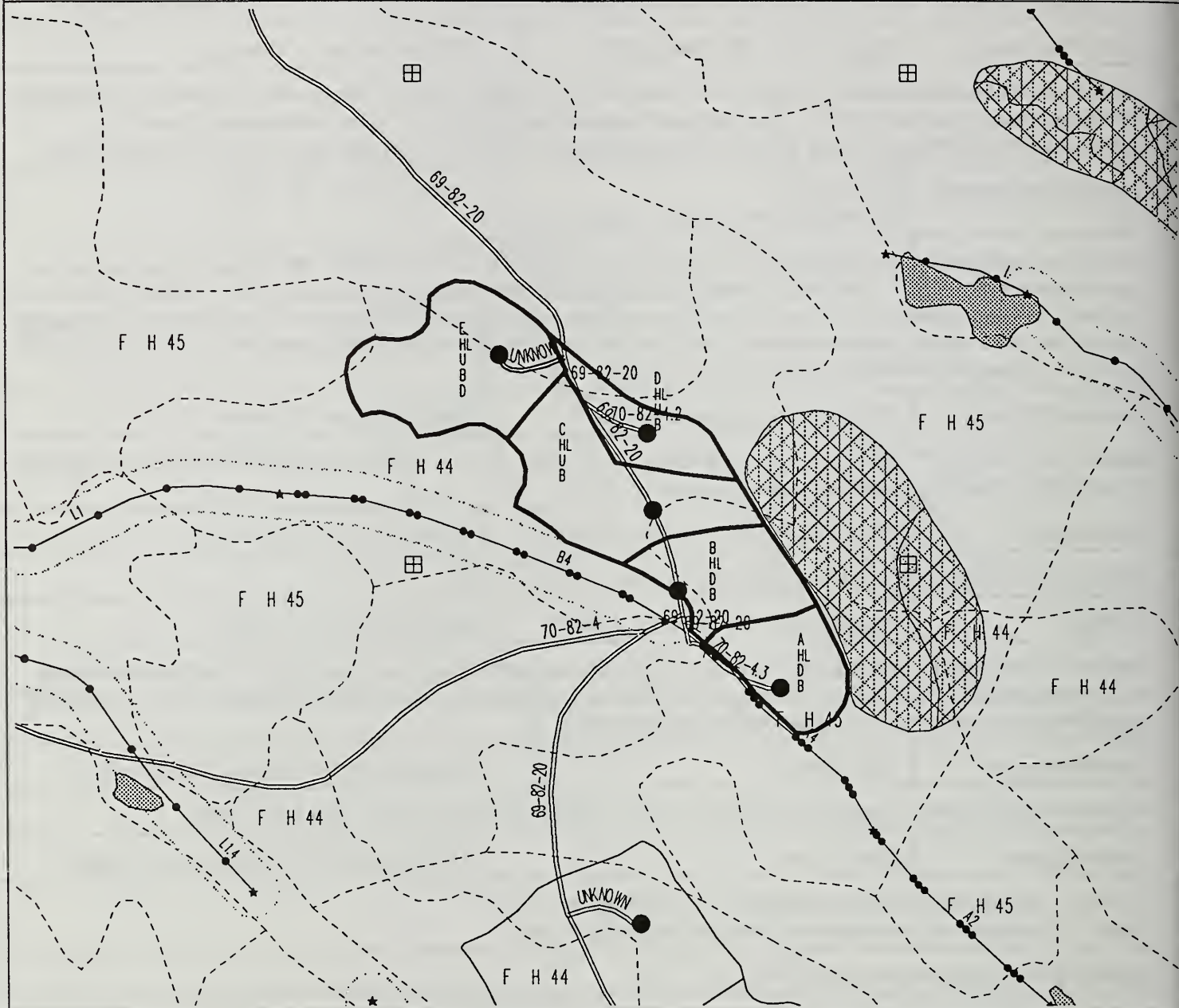
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|--|--|---|--------------------------|
| VCU #: 574 | UNIT #: 441 | QUARTER QUAD: D3SW | PHOTO YR/#: 1991/ 990-84 |
| ACRES: 46.2 | VOL.: 1194.5 MBF | LOGGING SYSTEM: Swingyard/Running Skyline | |
| LANDSCAPE ZONE: Unit is within medium Honker Block and second 1/4 mile of Thorne River scenic corridor. | | | |
| Timber/Vegetation | Field Review: M. Case, 8/6/93 | Office Review: J. Goering | |
| Species composition predominantly hemlock and cedar with a few spruce present. Regeneration predominantly hemlock but includes some cedar and spruce. Good advanced regeneration (candidate for release) consisting of cedar. Heavy amount of mistletoe infection evident in isolated portions of canopy. Some thin soil, poor soil drainage areas. | | | |
| Logging/Transportation | Field Review: M. Whitty/J. Herzberg/C. Giles, 8/03/93 | Office Review: M. Whitty | |
| Recommend swingyarder with running skyline and highlead configurations, 55% uphill. Maximum yarding distance is approximately 600' to 700'. Lift trees in buffer will be required to recover scattered large spruce. Partial suspension not required. Artificial anchors will be required to anchor swingyarder guylines due to scattered trees suitable for guystumps. Most of the unit is small, defective hemlock and cedar. East unit boundary should be moved 100' to 300' down the hill due to low volume and visibility concerns. Fair economics. | | | |
| Watershed/Fisheries | Field Review: B. Romey, 7/26/93 | Office Review: T. Stewart | |
| Stream 1 is Class I, B/W, 100' no-cut plus 50' selective cut buffer. Stream on south unit border is Class II as with 100' no-cut buffer. Small low grade cut stream in center of unit. | | | |
| Soils/Geology | Field Review: M. Minnillo, 7/26/93 | Office Review: T. Stewart | |
| Relatively dry site; no evidence of instability; low to moderate slopes. | | | |
| Wildlife | Field Review: M. Minnillo, 7/26/93 | Office Review: C. Confer | |
| Structure (Level 1) to be retained along streams on the south and west. Large contiguous block of old-growth habitat. No previous harvest in area. Avoid disturbance of wintering trumpeter swans by avoiding all human activity 0.5 mile of known swan wintering areas during October 15 through March 15. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Road above unit is seen. Maximum modification VQO. Road within unit should be kept below ridge. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Class I stream below unit requires 100' no-cut buffer and 50' selective cut buffer. 100' to 50' no-cut buffers on south end of unit. Southeast portion of unit reverts back to original paper plan. Overstory removal (Type E harvest trees 16" DBH and larger) below road taking care to avoid damage to advanced regeneration where possible. Type B clearcut above road where downhill yarding occurs. Mitigation measures for this unit are as follows: F5, F6, F8, W2, and W4. | | | |

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

VCU : 574

UNIT : 442

QUAD : D3-SW



- Revised Control Lake Project Boundary
- Past-Field Unit Boundary w/ Setting Codes
- Other Post-Field Unit Boundaries
- USFS Timber Types for Valc 4-7
- Eagle Tree Buffer of 330ft
- Existing & Rebuilt Roads
- F.S. Roads Under Construction
- Post-Field Proposed Roads
- Ahmu-Class 1 & Stream Chantypes
- Ahmu-Class 2 & Stream Chantypes
- Ahmu-Class 3 & Stream Chantypes
- Channel Type Change

- Lakes and Ponds
- Second Growth Units
- MMI 4
- McGilvery > 41
- Landings
- Stream & Lake NoCUT Buffers

August 03, 1994

.5 MILE

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

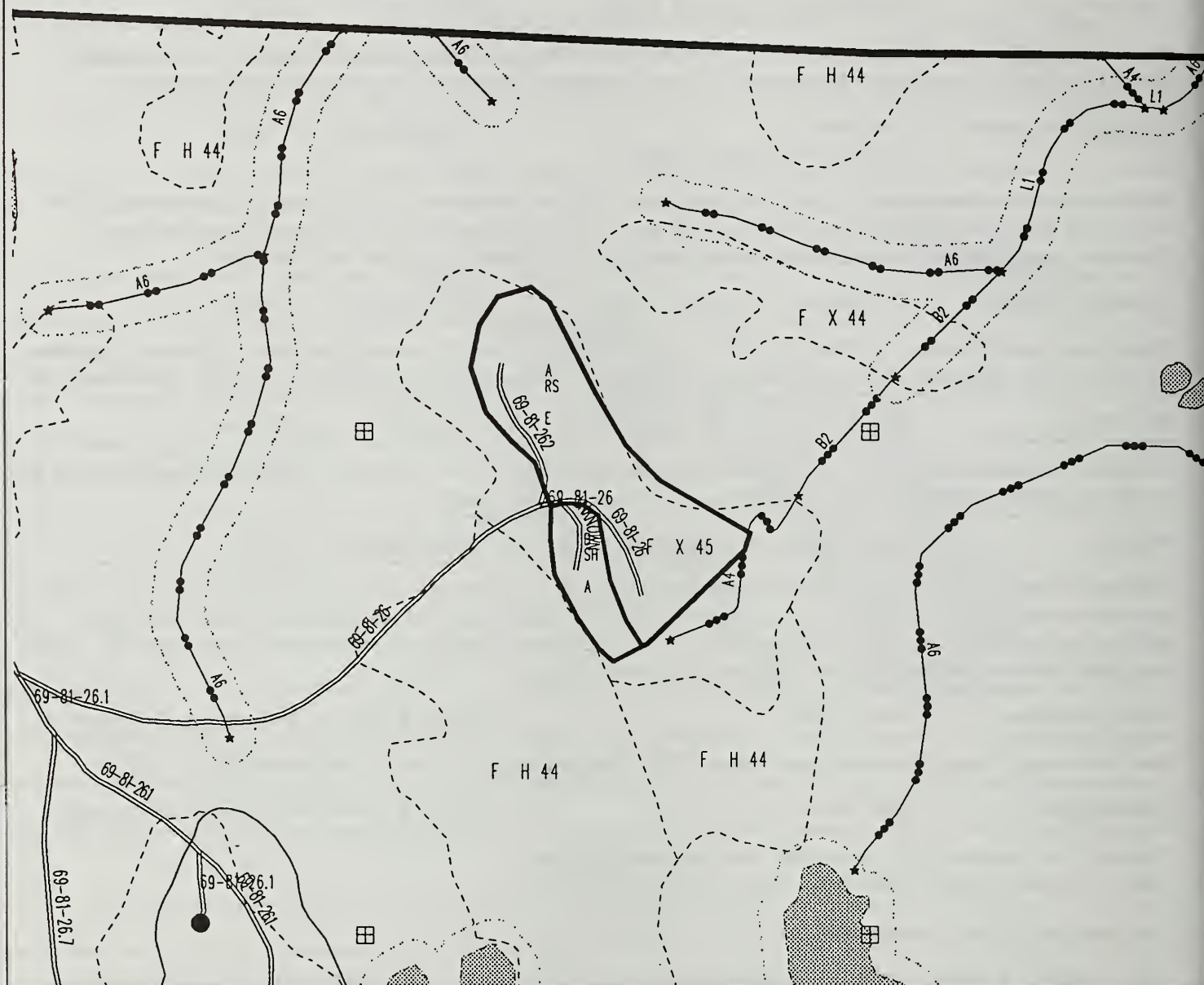
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|--|--|---|--------------------------|
| VCU #: 574 | UNIT #: 442 | QUARTER QUAD: D3SW | PHOTO YR/#: 1991/690-165 |
| ACRES: 28.7 | VOL.: 685.5 MBF | LOGGING SYSTEM: Highlead with 70' Tower | |
| LANDSCAPE ZONE: Unit is in proposed medium Honker Block. | | | |
| Timber/Vegetation | Field Review: T. Stecher, 8/20/93 | Office Review: J. Goering | |
| Species composition predominantly hemlock with some cedar. Few spruce are present. Regeneration predominantly hemlock with a few spruce but is lacking cedar. Low to moderate amounts of stem decay evident in hemlock. | | | |
| Logging/Transportation | Field Review: J. Doyal/J. Herzberg, 8/20/93 | Office Review: M. Whitty | |
| Unit is accessed by Road #69-82-20 and three short spurs. The recommended logging system is highlead with 70 foot tower, 50% uphill. One landing may need deadman guys. The northwest setting has two small blind lead areas. Blowdown potential can be minimized by leaving cedar next to NW boundary. Economics are good. | | | |
| Watershed/Fisheries | Field Review: B. Romey, 7/26/93 | Office Review: T. Stewart | |
| Stream along south boundary is Class IIa, B/W - needs 100' no-cut plus 50' selective cut buffer. Upstream it becomes Class IIb, O/W - directional fall in 150' selective cut buffer. Further upstream it is Class III, O/W - directionally fall. | | | |
| Soils/Geology | Field Review: M. Minnillo, 7/26/93 | Office Review: T. Stewart | |
| McGilvery soils identified in the eastern end of unit between 900' and 1,200' elevation. Lower unit boundary below 900' in order to exclude McGilvery soils. Much wind and slumped, large trees. | | | |
| Wildlife | Field Review: M. Minnillo, 7/26/93 | Office Review: C. Confer | |
| East end of unit is high deer use. High bedding and browse. Recommend leaving a 150' to 200' swath of trees through the center of unit going north and south in order to provide a corridor between lower elevation riparian and upper elevation muskeg/subalpine. This will also provide Level 1 structure. High level of game trails; deer observed. Large contiguous block of old-growth habitat. No previous harvest in area. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Road above unit is seen, Maximum Modification VQO. Road within unit should be kept below ridge. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | Reviewed By: | |
| Upper boundary in eastern portion of unit lowered to avoid McGilvery soils. Western portion of unit deferred due to loggability. The portion of the stream requiring 100' no-cut plus 50' selective cut is no longer adjacent to unit. 100' no-cut plus 50' selective cut buffer for Class II stream along south boundary, and directionally fall trees away from Class III segment. Type B and D clearcuts with two blind lead leave islands. Mitigation measures for this unit are as follows: F1, F5, F8, F10, W1 and W4. | | | |

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

VCU : 574

UNIT : 443

QUAD : D3-SW



- Revised Control Lake Project Boundary
- Post-Field Unit Boundary w/ Setting Codes
- Other Post-Field Unit Boundaries
- USFS Timber Types for Valc 4-7
- Eagle Tree Buffer of 330ft
- Existing & Rebuilt Roads
- F.S. Roads Under Construction
- Post-Field Proposed Roads
- Ahmu-Class 1 & Stream Chantypes
- Ahmu-Class 2 & Stream Chantypes
- Ahmu-Class 3 & Stream Chantypes
- Channel Type Change

- Lakes and Ponds
- Second Growth Units
- MMI 4
- McGilvery > 41
- Landings
- Stream & Lake NoCUT Buffers

May 13, 1994

.5 MILE

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

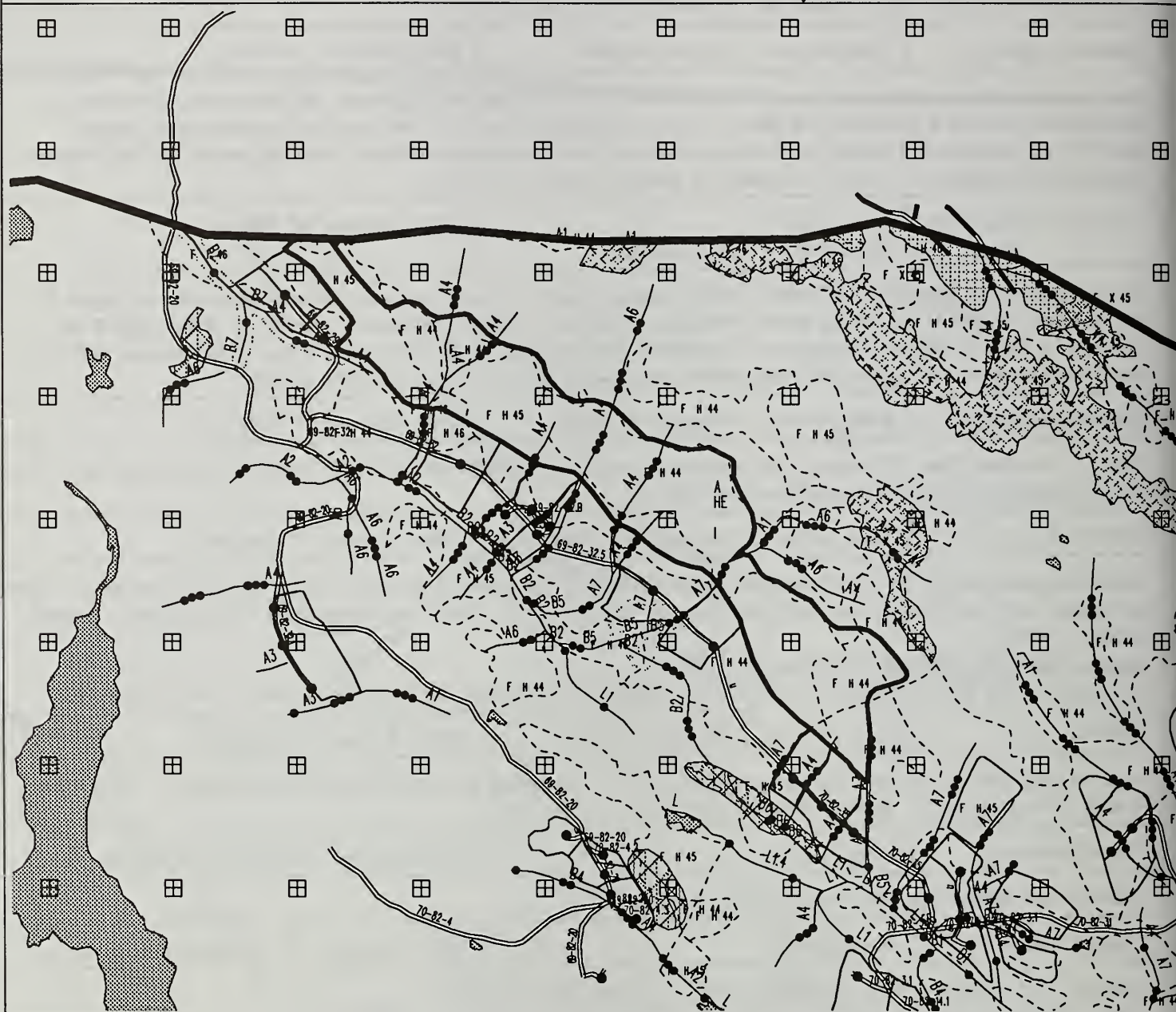
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| VCU #: 574 | UNIT #: 443 | QUARTER QUAD: D3SW | PHOTO YR/#: 1991/990-52 |
| ACRES: 15.5 | VOL.: 370.6 MBF | LOGGING SYSTEM: Swingyard/Running Skyline/Shovel | |
| LANDSCAPE ZONE: Unit is within the Honker Divide watershed. | | | |
| Timber/Vegetation | Field Review: J. Miller, 8/25/93 | Office Review: J. Goering | |
| Species composition predominantly hemlock with some cedar. Few spruce are present. Regeneration predominantly hemlock but includes a few cedar and spruce. Many small seeps, thin soils, and poor soil drainage areas. Slope instability/failure potential existing in the eastern portion due to steep slopes and soil water movement. Good advanced regeneration (candidate for release) consisting of hemlock, cedar, and spruce. | | | |
| Logging/Transportation | Field Review: B. Flatz/B. Wilkinson, 9/01/93 | Office Review: M. Whitty | |
| Unit is accessed by Road #69-81-26 and a short temporary spur. Twenty percent of the unit can be shovel logged; 80% can be uphill yarded using a swing yarder with running skyline. Partial suspension is possible on slopes >60% as required by soils specialist. Partial cutting is possible, but will be difficult due to steep slopes. The southern part of the unit was deleted because suspension requirements could not be met. Economics are fair to good. | | | |
| Watershed/Fisheries | Field Review: J. Metzler, 8/10/93 | Office Review: T. Stewart | |
| There is one small Class III stream on the south unit boundary that feeds into a Class II stream just below the unit. This stream should be protected by using directional falling. | | | |
| Soils/Geology | Field Review: J. Metzler, 8/10/93 | Office Review: T. Stewart | |
| One small landslide (20'w x 30'h) was observed at the head of the Class III stream. Soils in the upper portion of the unit are shallow and erodible (but not McGilvery - they're mineral soils). Partial suspension should be achieved in this area (slopes >60%). <u>Geology/Karst (D. Herron/R. Horrocks, 8/19/93):</u> Unit surveyed for karst topography. Unit surface covered by glacial till. No limestone or karst features observed. | | | |
| Wildlife | Field Review: J. Metzler, 8/10/93 | Office Review: C. Confer | |
| Signs of high deer use in unit. Only large timber in area - surrounded by nonmerchantable and muskegs. Several lakes in area. Geese observed. Level 1 structure retention. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit not seen from any priority travel route or use area. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Southern half of unit was dropped due to lack of required suspension. Overstory removal (Type E harvest trees 13.0" DBH and larger) below road where uphill yarding permits. Use care to protect advanced regeneration where possible. Type A clearcut in remainder of unit. Directionally fall trees away from Class III stream on east boundary. Mitigation measures for this unit are as follows: F1, F6, F8, F10, W2, and W5. | | | |

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

VCU : 574

UNIT : 444

QUAD : D3-SW



- Revised Control Lake Project Boundary
- Post-Field Unit Boundary w/ Setting Codes
- Other Post-Field Unit Boundaries
- USFS Timber Types for Volc 4-7
- Eagle Tree Buffer of 330ft
- Existing & Rebuilt Roads
- F.S. Roads Under Construction
- Post-Field Proposed Roads
- Ahmu-Class 1 & Stream Chantypes
- Ahmu-Class 2 & Stream Chantypes
- Ahmu-Class 3 & Stream Chantypes
- Channel Type Change

- Lakes and Ponds
- Second Growth Units
- MMI 4
- McGilvery > 41
- Landings
- Stream & Lake NoCUT Buffers

1 MILE

March 03, 1995

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

| | | | |
|---|-----------------------|--------------------------------------|------------------------------------|
| VCU #: 574 | UNIT #: 444 | QUARTER QUAD: D3SW | PHOTO YR/#: 1991/990-83 690-167 |
| ACRES: 356.8 | VOL.: 12444.5 MBF | LOGGING SYSTEM: Helicopter | |
| LANDSCAPE ZONE: A small part of this unit is within the Baird Peak Late Successional Corridor; most of the unit is within the Honker Watershed. | | | |
| Timber/Vegetation | Field Review: | Office Review: A. Wolfson | |
| Species composition predominantly hemlock and cedar but a few spruce are present. Regeneration predominantly hemlock but includes some spruce and a few cedar. Moderately low volume, with <50% canopy closure & relatively low site productivity. Poor soil drainage areas along with Alaska yellow-cedar decline evident. High elevation, southwest exposure subject to blowdown. | | | |
| Logging/Transportation | Field Review: 8/13/93 | Office Review: A. Wolfson | |
| Units 574-434, -435, -436 and -437 located downslope of this unit were field reviewed. | | | |
| Watershed/Fisheries | Field Review: | Office Review: T. Stewart | |
| There are a \$* S[Ruf WPS] in Class III streams \$* loc [SR in WPS] unit, several of which are V-notch. | | | |
| Soils/Geology | Field Review: | Office Review: T. Stewart | |
| Soils vary from thin, shallow, wet soils covering fractured bedrock to small, shallow, past landslides. Full suspension is required on high hazard, unstable soils. | | | |
| Wildlife | Field Review: | Office Review: R. Fairbanks | |
| Level 1 structure retention. Previously unharvested area. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross/M. Greenig | |
| Retention VQO in seen area; Maximum Modification in unseen area. | | | |
| Cultural/Lands | Field Review: | Office Review: W. Greiser/M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Complete field verification of all resource information is required prior to final unit layout. Directionally fall timber along Class III streams and split yard, staying above topographic breaks of V-notch areas. Type I - Single Tree/Group Selection, removing up to 12% of seen area in strips (4) 40', (19) 70' and (6) 200' wide, distributed across the landscape. Helicopter yard with full suspension. Mitigation measures for this unit are as follows: F1, F2, F3, F4, F5, F6, F7, F8 (landings), T1, V1, V2 and W2. | | | |

NO UNIT MAP
UNIT DROPPED OR DEFERRED

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

| | | | |
|---|-----------------------------------|------------------------------|-------------|
| VCU #: 575 | UNIT #: 401 | QUARTER QUAD: D3SE | PHOTO YR/#: |
| ACRES: | VOL.: | LOGGING SYSTEM: | |
| LANDSCAPE ZONE: | | | |
| Timber/Vegetation | Field Review: J. Boyce, 6/15/93 | Office Review: | |
| Understory conifer regeneration is lacking. Canopy gaps show a high density of brush composition. Adequate conifer regeneration is not expected within 5 years if the overstory is removed. High elevation, 1,600' to 1,900'. | | | |
| Logging/Transportation | Field Review: | Office Review: | |
| | | | |
| Watershed/Fisheries | Field Review: T. Stewart, 6/15/93 | Office Review: G. McNaughton | |
| Alluvial fan channels at bottom of unit would require minimum 25' buffer. Unit is very small when MMI is excluded plus buffers. See timber/silviculture. No fish in this high elevation cirque. | | | |
| Soils/Geology | Field Review: T. Stewart, 6/15/93 | Office Review: G. McNaughton | |
| Upper unit is MMI4 with slopes of >70%. Unit is also dissected by debris avalanches, and several snow avalanche paths extend into and through the unit. With exclusion of MMI4 unit is very small. See timber/silviculture. | | | |
| Wildlife | Field Review: | Office Review: | |
| | | | |
| Visual/Recreation | Field Review: | Office Review: | |
| | | | |
| Cultural/Lands | Field Review: | Office Review: | |
| | | | |
| Interdisciplinary Team Recommendations | | | |
| Unit dropped due to MMI4 soils. | | | |

NO UNIT MAP
UNIT DROPPED OR DEFERRED

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

| | | | |
|---|-----------------------------------|---------------------------------------|-------------|
| VCU #: 575 | UNIT #: 402 | QUARTER QUAD: D3SE | PHOTO YR/#: |
| ACRES: | VOL.: | LOGGING SYSTEM: | |
| LANDSCAPE ZONE: | | | |
| Timber/Vegetation | Field Review: J. Boyce, 6/15/93 | Office Review: | |
| Understory conifer regeneration is lacking. Canopy gaps show a high density of brush composition. Adequate conifer regeneration is not expected within 5 years if the overstory is removed. High elevation, 1,400' to 1,800'. | | | |
| Logging/Transportation | Field Review: | Office Review: | |
| | | | |
| Watershed/Fisheries | Field Review: T. Stewart, 6/15/93 | Office Review: G. McNaughton, 7/06/93 | |
| Alluvial fan channels at bottom of unit would require minimum 25' buffer. Unit is very small when MMI4 excluded plus buffers. No fish in this high elevation cirque. See timber/silviculture. | | | |
| Soils/Geology | Field Review: T. Stewart, 6/15/93 | Office Review: G. McNaughton, 7/06/93 | |
| Upper unit mapped MMI4. Mapping is correct - slopes are > 70%. Unit is also dissected by debris avalanches, and snow avalanche paths which extend into and through the unit. With exclusion of MMI unit is very small. See timber/silviculture. | | | |
| Wildlife | Field Review: | Office Review: | |
| | | | |
| Visual/Recreation | Field Review: | Office Review: | |
| | | | |
| Cultural/Lands | Field Review: | Office Review: | |
| | | | |
| Interdisciplinary Team Recommendations | | | |
| Unit dropped due to MMI4 soils. | | | |

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

VCU : 575

UNIT : 403

QUAD : D3-SE



- Revised Control Lake Project Boundary
- Post-Field Unit Boundary w/ Setting Codes
- Other Post-Field Unit Boundaries
- USFS Timber Types for Volc 4-7
- Eagle Tree Buffer of 330ft
- Existing & Rebuilt Roads
- F.S. Roads Under Construction
- Post-Field Proposed Roads
- Ahmu-Class 1 & Stream Chantypes
- Ahmu-Class 2 & Stream Chantypes
- Ahmu-Class 3 & Stream Chantypes
- Channel Type Change

- Lakes and Ponds
- Second Growth Units
- MMI 4
- McGilvery > 41
- Landings
- Stream & Lake NoCUT Buffers

May 13, 1994

.5 MILE

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

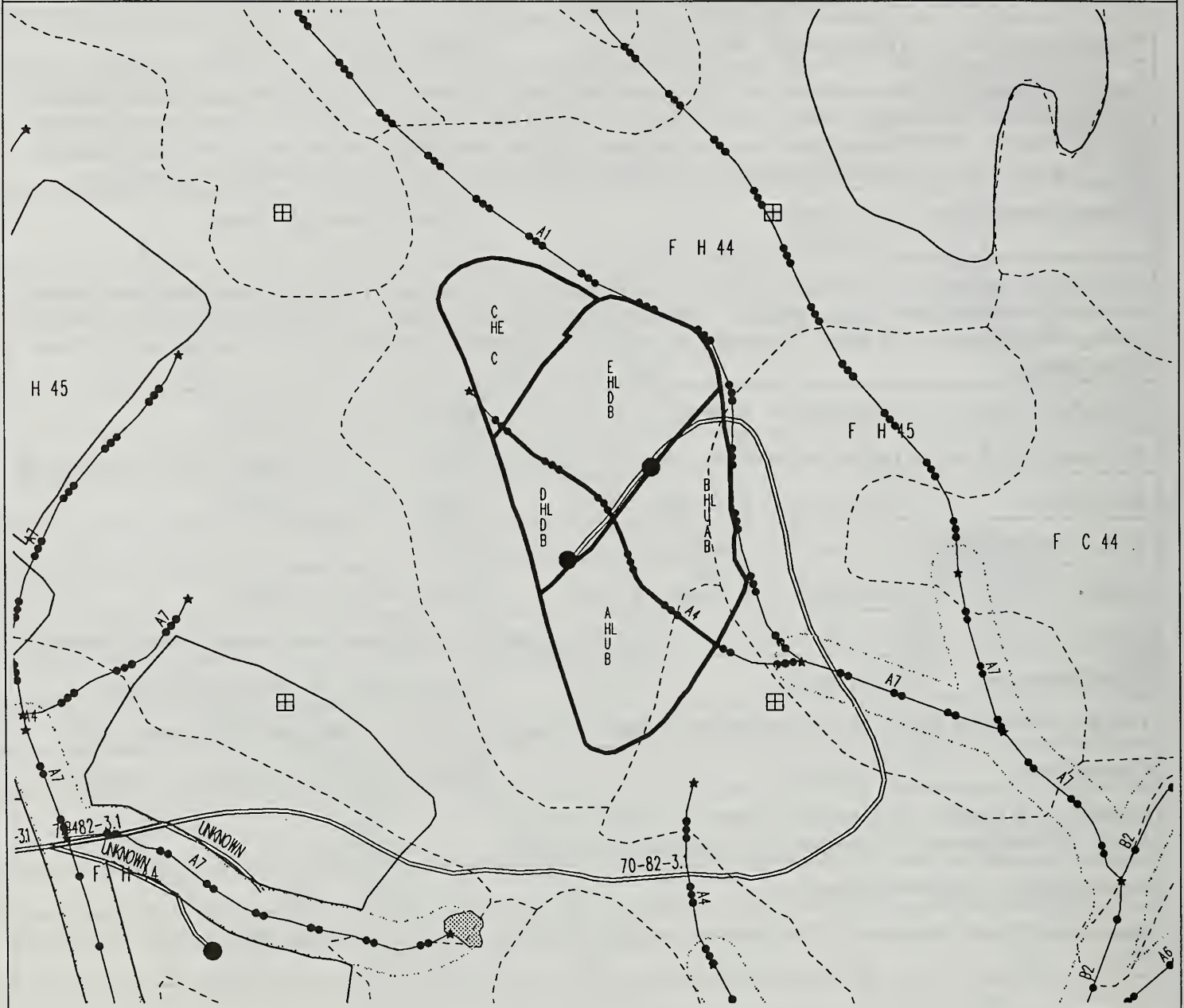
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|---|--|---|---------------------------|
| VCU #: 575 | UNIT #: 403 | QUARTER QUAD: D3SE | PHOTO YR/#: 1991/1090-203 |
| ACRES: 24.9 | VOL.: 896.0 MBF | LOGGING SYSTEM: Helicopter | |
| LANDSCAPE ZONE: Unit is within Baird Peak Corridor. | | | |
| Timber/Vegetation | Field Review: M. Case, 7/26/93 | Office Review: J. Goering | |
| Species composition predominantly hemlock but includes cedar and some spruce. Regeneration predominantly hemlock with some spruce but is lacking cedar. Steep, rocky, and shallow soils. Salmonberry present. Slope instability/failure potential existing. Small failure evident in central-southwest portion. Windthrow damage present in middle portion of unit. Regeneration concerns due to relatively high elevation, shallow rocky soils, and the presence of salmonberry. | | | |
| Logging/Transportation | Field Review: J. Doyal/J. Graves, 7/23/93 | Office Review: M. Whitty | |
| Access to this unit was tried via Road #70-82-3.1. Three routes were attempted. Two ran into rock bluffs and the third was too high to make cable logging practical. Helicopter logging is recommended. Average flight distance is 2800 feet. Average flight slope is -10% slope. Economics are fair. Good recreational opportunities below unit and to NE of unit around lakes. | | | |
| Watershed/Fisheries | Field Review: B. Romey, 7/14/93 | Office Review: T. Stewart | |
| No streams within unit as laid out on photo and paper (leave unit boundary as is). Bad V-notch outside of unit, Class III. | | | |
| Soil/Geology | Field Review: B. Romey, 7/14/93 | Office Review: T. Stewart | |
| Slumps and wet soils outside of unit to the northeast. Leave unit boundary as is. | | | |
| Wildlife | Field Review: B. Romey, 7/14/93 | Office Review: M. Hall | |
| Sapsucker observed. Low to moderate deer use. Retain structure along unit boundary when feasible - Level 1 retention. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit is not seen from Honker Divide, priority travel routes, use areas, or use areas. Maximum Modification VQO. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Recommend Type G shelterwood. Use helicopter yarding. Mitigation measures for this unit are as follows: F1, F8, and W2. | | | |

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

VCU : 575

UNIT : 404

QUAD : D3-SE



- Revised Control Lake Project Boundary
- Post-Field Unit Boundary w/ Setting Codes
- Other Post-Field Unit Boundaries
- USFS Timber Types for Volc 4-7
- Eagle Tree Buffer of 330ft
- Existing & Rebuilt Roads
- F.S. Roads Under Construction
- Post-Field Proposed Roads
- Ahmu-Class 1 & Stream Chantypes
- Ahmu-Class 2 & Stream Chantypes
- Ahmu-Class 3 & Stream Chantypes
- Channel Type Change

- Lakes and Ponds
- Second Growth Units
- MMI 4
- McGilvery > 41
- Landings
- Stream & Lake NoCUT Buffers

June 09, 1994

.5 MILE

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

| | | | |
|--|--|--|---------------------------|
| VCU #: 575 | UNIT #: 404 | QUARTER QUAD: D3SE | PHOTO YR/#: 1991/1090-203 |
| ACRES: 35.4 | VOL.: 482.2 MBF | LOGGING SYSTEM: Highlead with Large Tower/Helicopter | |
| LANDSCAPE ZONE: Unit is within the Baird Peak Corridor. | | | |
| Timber/Vegetation | Field Review: G. Hedin, 7/24/93 | Office Review: J. Goering | |
| Species composition predominantly hemlock and cedar with some spruce present. Regeneration predominantly hemlock but includes a few cedar and spruce. Moderately low volume, multi-canopy stand with < 50% canopy closure in the southern portion. | | | |
| Logging/Transportation | Field Review: J. Doyal/J. Graves/C. Giles | Office Review: J. Doyal/E. Urstadt | |
| Two landings will be used to harvest the unit. Guyline twisters may be needed at Landing 5+90R. 90% of the unit is downhill logging. A 100' tower using highlead is recommended. Profiles going up from landings will be needed to put in proper unit boundary. Blowdown may be a problem; possibly leave 50' of unmerchantable timber to solve. The timbered areas above (north) of the unit should be looked at for future access during final layout. Economics are fair. | | | |
| Watershed/Fisheries | Field Review: B. Romey, 7/14/93 | Office Review: T. Stewart | |
| Stream 1 is a Class III, O/W, through whole reach. Mark unit from slope break, directional fall away from stream. Use V-notch as east unit boundary. | | | |
| Soil/Geology | Field Review: B. Romey, 7/14/93 | Office Review: T. Stewart | |
| Slopes mostly under 50%, stable soils. | | | |
| Wildlife | Field Review: B. Romey, 7/14/93 | Office Review: M. Hall | |
| Retain structure along unit boundary when feasible - Level 1 retention. No concerns. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Western "ridge mass" visible from Honker Divide - Retention VQO. The rest of unit is not visible from any priority travel routes or use areas. Maximum modification VQO. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Western ridge nose excluded from unit. Northwestern section helicopter log where inaccessible from cable logging system: Type C clearcut but leave small islands of small diameter trees. Type B clearcut in remainder of unit. Split yard stream in center of unit. Mitigation measures for this unit are as follows: F6, F7, F8, W1, W3, and W4. | | | |

NO UNIT MAP
UNIT DROPPED OR DEFERRED

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

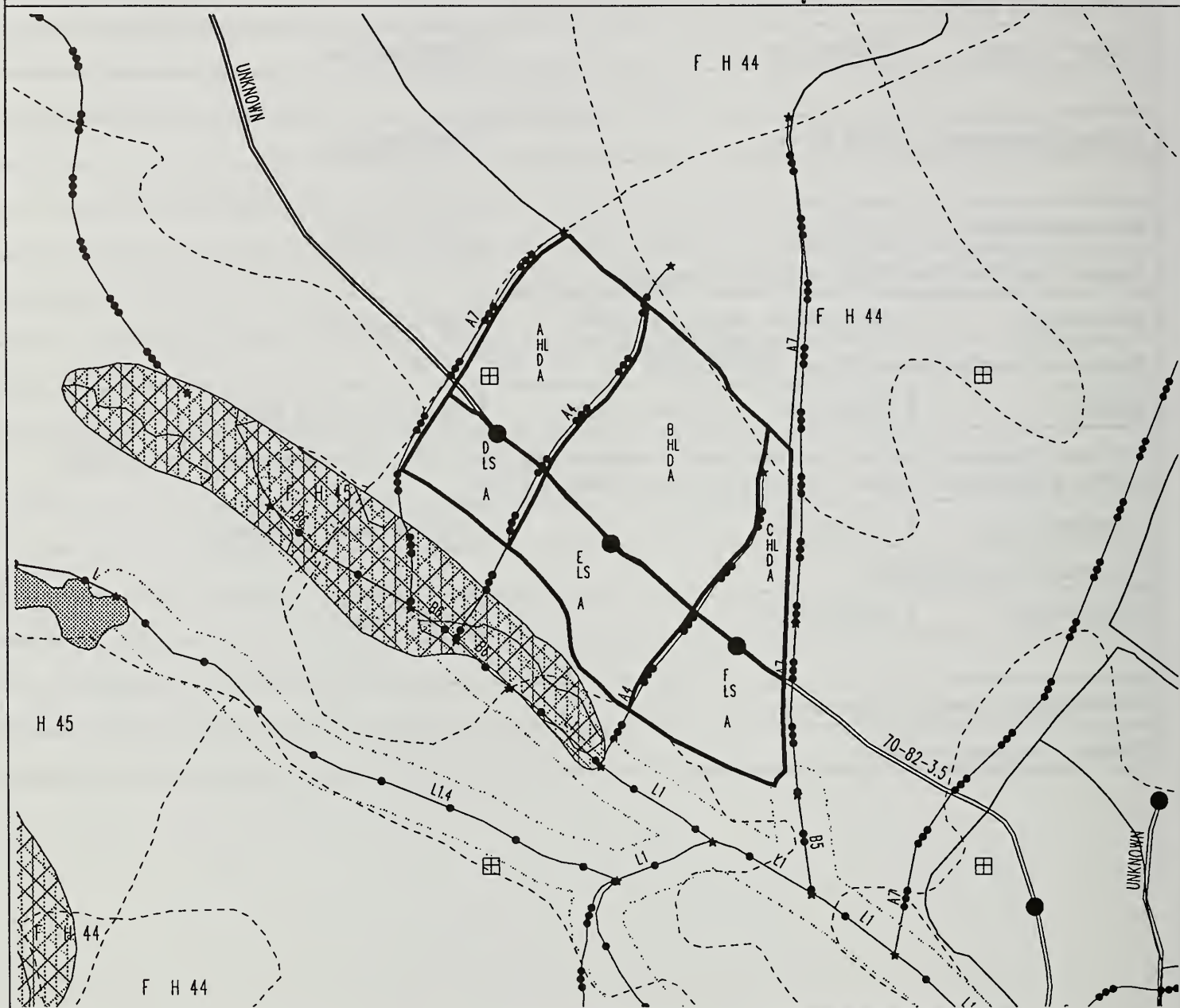
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|--|------------------------------------|---------------------------|---------------------|
| VCU #: 575 | UNIT #: 405 | QUARTER QUAD: D3SE | PHOTO YR/#: 690-168 |
| ACRES: | VOL.: | LOGGING SYSTEM: | |
| LANDSCAPE ZONE: | | | |
| Timber/Vegetation | Field Review: | Office Review: | |
| | | | |
| Logging/Transportation | Field Review: | Office Review: | |
| | | | |
| Watershed/Fisheries | Field Review: R. Rogers, 7/23/93 | Office Review: | |
| Streams 1 and 2 are Class III; directional fall, split yard. | | | |
| Soil/Geology | Field Review: R. Rogers, 7/23/93 | Office Review: | |
| Reduce unit boundary below cliffs at 1,350' elevation. | | | |
| Wildlife | Field Review: A. Sullivan, 7/23/93 | Office Review: M. Hall | |
| Low deer utilization. First entry into large track of contiguous old growth. Bear signs found high in unit and along muskeg in South corner of unit. No special concerns. Retention Level 1. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross | |
| May need to do some shaping. | | | |
| Cultural/Lands | Field Review: | Office Review: | |
| | | | |
| Interdisciplinary Team Recommendations | | | |
| Deferred. Adjacent to 575-408 | | | |

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

VCU : 575

UNIT : 406

QUAD : D3-SE



- Revised Control Lake Project Boundary
- Post-Field Unit Boundary w/ Setting Codes
- Other Post-Field Unit Boundaries
- USFS Timber Types for Volc 4-7
- Eagle Tree Buffer of 330ft
- Existing & Rebuilt Roads
- F.S. Roads Under Construction
- Post-Field Proposed Roads
- Ahmu-Class 1 & Stream Chantypes
- Ahmu-Class 2 & Stream Chantypes
- Ahmu-Class 3 & Stream Chantypes
- Channel Type Change

- Lakes and Ponds
- Second Growth Units
- MMI 4
- McGilvery > 41
- Landings
- Stream & Lake NoCUT Buffers

May 13, 1994

.5 MILE

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

| | | | |
|--|---|---|--------------------------|
| VCU #: 575 | UNIT #: 406 | QUARTER QUAD: D3SE | PHOTO YR/#: 1991/690-168 |
| ACRES: 45.3 | VOL.: 1532.9 MBF | LOGGING SYSTEM: Live Skyline/Highlead with 100' Tower | |
| LANDSCAPE ZONE: Unit is within the Baird Peak Corridor. | | | |
| Timber/Vegetation | Field Review: T. Stecher, 7/26/93 | Office Review: J. Goering | |
| Species composition predominantly hemlock but includes some spruce and cedar. Regeneration predominantly hemlock with a few spruce but is lacking cedar. Many small seeps, streams, and poor soil drainage areas. Windthrow damage evident throughout the upper elevations due to thin soils and soil water movement. Promote spruce/cedar regeneration through planting. | | | |
| Logging/Transportation | Field Review: J. Doyal/ J. Graves, 7/26/93 | Office Review: E. Urstadt | |
| Unit is accessed by Road #70-82-3.5 and three small spurs. Seventy percent can be downhill logged with highlead and 30% can be uphill yarded using a shotgun system. Guy stumps and tailholds will allow use of a slackline system if partial suspension is required. Partial cut is not practical due to steep slopes. There is a 200 foot stream buffer on the south boundary. Economics are good. | | | |
| Watershed/Fisheries | Field Review: R. Rogers, 7/23/93 | Office Review: G. McNaughton | |
| Stream 1 is a Class I; needs 100' no-cut buffer from edge of floodplain as flagged. Streams 2 and 4 are Class III; directional fall/split yard. Stream 3 in southeast corner of unit is a Class II, Type B5; needs 100' no-cut and 50' selective harvest buffer. | | | |
| Soil/Geology | Field Review: R. Rogers, 7/23/93 | Office Review: G. McNaughton | |
| No special concerns noted, 20% to 40% slopes. | | | |
| Wildlife | Field Review: A. Sullivan, 7/23/93 | Office Review: M. Hall | |
| Low deer utilization. Goshawk survey conducted - no detection. Bear signs limited to muskeg along lower unit boundary. Beaver activity. No special concerns. First entry into continuous old-growth. Level 1 structure retention. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit is not seen from any priority travel route or use areas. Maximum Modification VQO. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Lower slope boundary placed at break in slope to floodplain; \geq 200' buffer laid out. Type A clearcut. Split yard the two Class III streams in unit and the two Class III streams that form the east and west boundary. Mitigation measures for this unit are as follows: F5, F6, F8, F10, and W5. | | | |

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

VCU : 575

UNIT : 407

QUAD : D3-SE



- Revised Control Lake Project Boundary
- Post-Field Unit Boundary w/ Setting Codes
- Other Post-Field Unit Boundaries
- USFS Timber Types for Volc 4-7
- Eagle Tree Buffer of 330ft
- Existing & Rebuilt Roads
- F.S. Roads Under Construction
- Post-Field Proposed Roads
- Ahmu-Class 1 & Stream Chantypes
- Ahmu-Class 2 & Stream Chantypes
- Ahmu-Class 3 & Stream Chantypes
- Channel Type Change

- Lakes and Ponds
- Second Growth Units
- MMI 4
- McGilvery > 41
- Landings
- Stream & Lake NoCUT Buffers

May 13, 1994

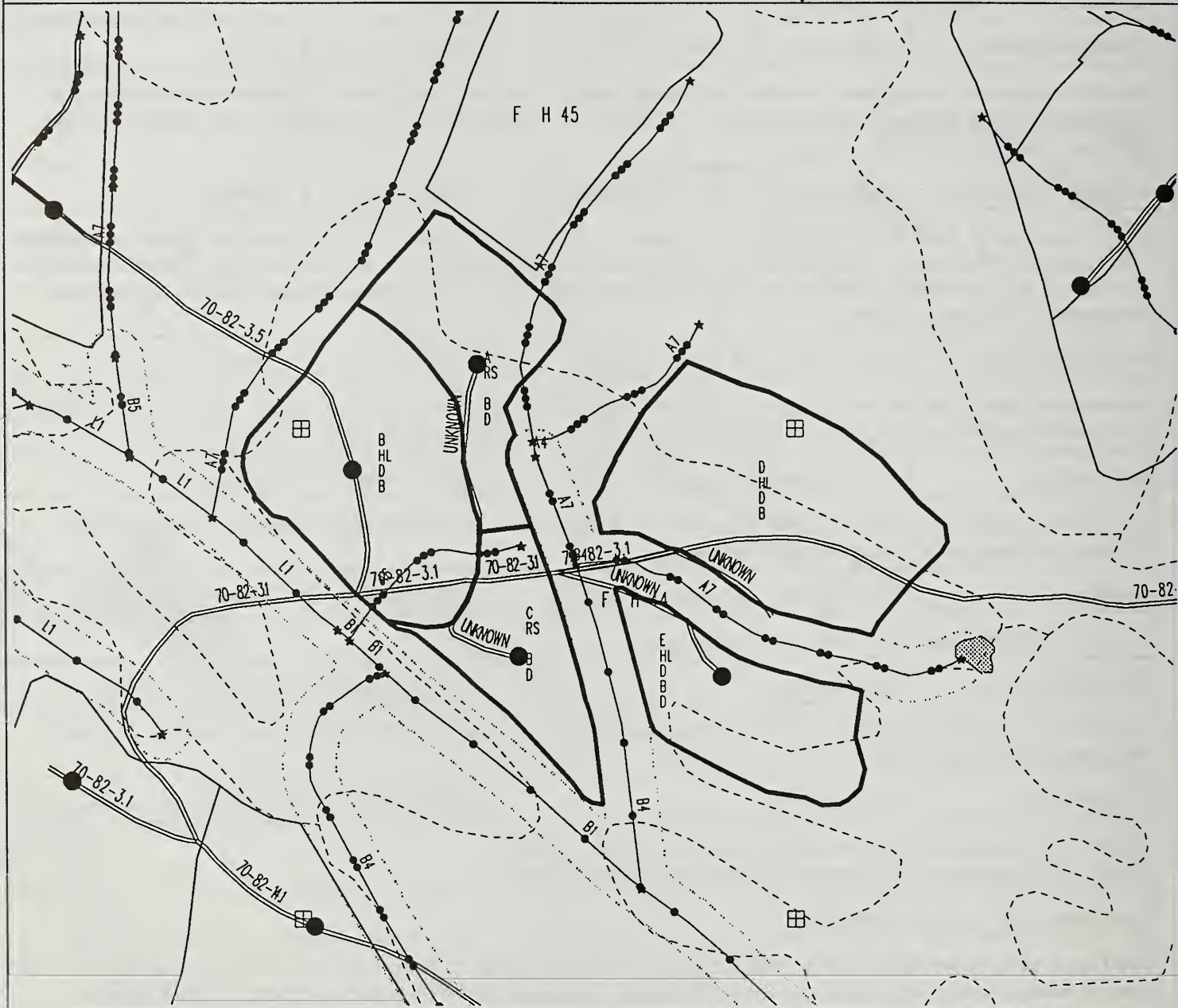
.5 MILE













CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD







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|---|--|--|---------------------------|
| VCU #: 575 | UNIT #: 407 | QUARTER QUAD: D3SE | PHOTO YR/#: 1991/1090-202 |
| ACRES: 54.5 | VOL.: 1919.4 MBF | LOGGING SYSTEM: Slackline System with 100' Tower | |
| LANDSCAPE ZONE: Unit is within the proposed Honker Block. | | | |
| Timber/Vegetation | Field Review: T. Stecher 7/19/93 | Office Review: J. Goering | |
| Species composition predominantly hemlock with some spruce. Few cedar are present. Regeneration predominantly hemlock with a few spruce but is lacking cedar. Steep slope, relatively thin soils and exposed rock. McGilvery soils present. | | | |
| Logging/Transportation | Field Review: J. Doyal/J. Graves 7/18/93 | Office Review: E. Urstadt | |
| Unit is accessed by Road #70-82-14.1. Partial suspension can be achieved with a 100 foot tower with slackline capability. Ninety percent of yarding is steep downhill and <u>safety</u> is a concern! Partial cut is not possible. The Class I stream to the NE needs a 100 foot buffer. Unit was placed below worst bluffs on SW edge. Bucking logs to smaller size may help suspension. Economics are good. | | | |
| Watershed/Fisheries | Field Review: B. Romey, 7/31/93 | Office Review: T. Stewart | |
| Stream to northwest side of unit is Class I and requires 100' buffer. Stream on east-northeast of unit is Class IIa below (100' buffer required, not flagged in field) and Class III above. Directional fall in Class III portion. | | | |
| Soil/Geology | Field Review: G. Jackson, 7/14/93 | Office Review: T. Stewart | |
| Cliffs, steep slopes, and McGilvery soils are present on western half of unit, although no slide scars were observed. Achieve maximum possible suspension in this area. | | | |
| Wildlife | Field Review: G. Jackson, 7/14/93 | Office Review: R. Fairbanks | |
| Light deer and bear use, large limbs in western area. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit not seen from any priority travel route or use area. Unit is not seen from any priority travel routes or use areas. Maximum Modification VQO. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Bluff areas along southwest boundary, and muskeg area along northwestern boundary, were excluded from the unit. Class I and II streams form northwestern and eastern boundary - minimum 100' TTRA buffer required. Type B clearcut because of downhill yarding. Buck trees to 16' length, plus trim, to maximize suspension in western cliff area and meet logging safety regulations. Mitigation measures for this unit are as follows: F1, F3, F4, F5, F8, F10, and W4. | | | |

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

QUAD : D3-SE



-  Revised Control Lake Project Boundary
-  Past-Field Unit Boundary w/ Setting Codes
-  Other Post-Field Unit Boundaries
-  USFS Timber Types for Volc 4-7
-  Eagle Tree Buffer of 330ft
-  Existing & Rebuilt Roads
-  F.S. Roads Under Construction
-  Post-Field Proposed Roads
-  Ahmu-Class 1 & Stream Chontypes
-  Ahmu-Class 2 & Stream Chontypes
-  Ahmu-Class 3 & Stream Chontypes
-  Channel Type Change

-  Lakes and Ponds
 Second Growth Units
 MMI 4
 McGilvery > 41
 Landings
 Stream & Lake NoCUT Buffers

.5 MILE

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

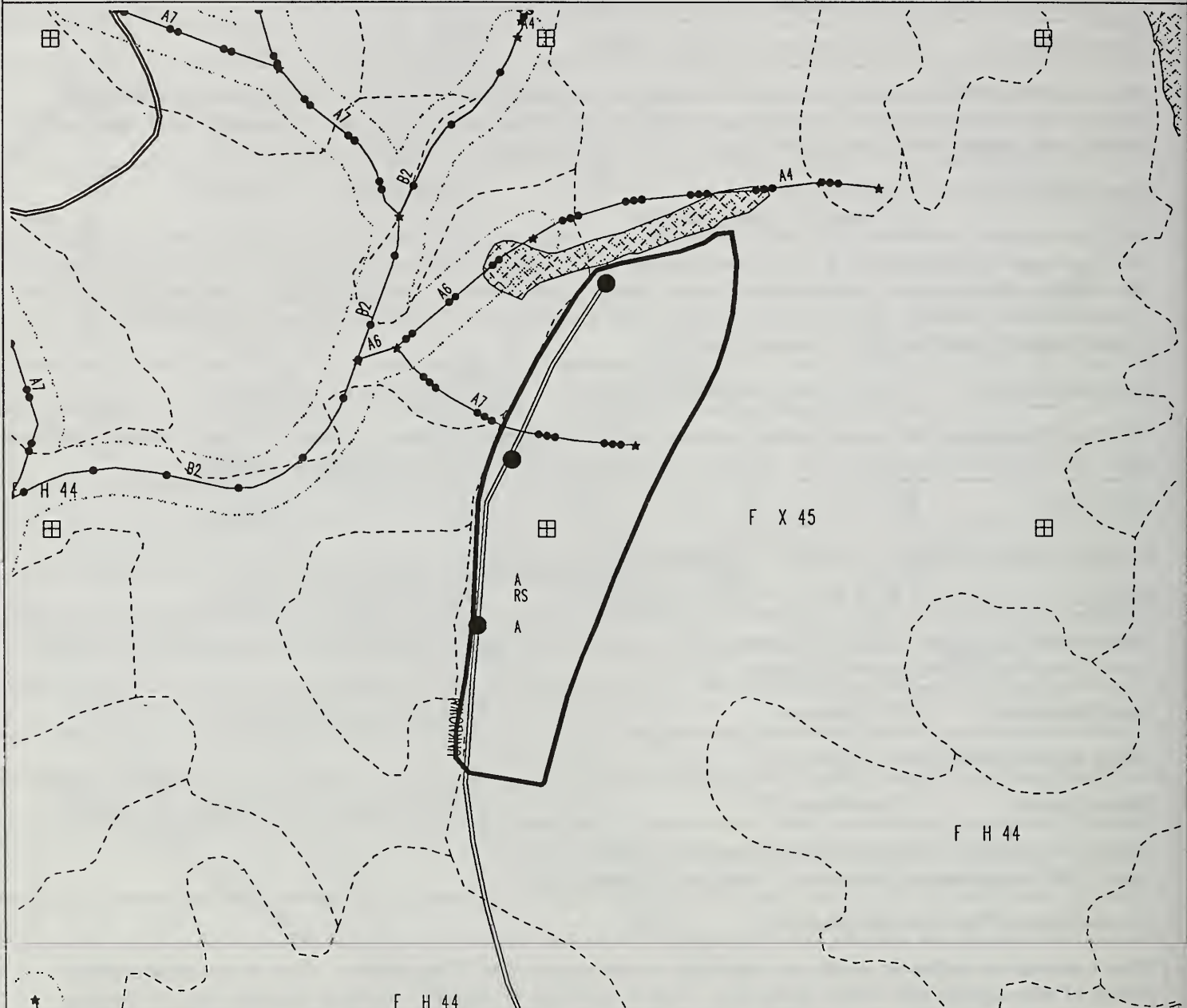
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|---|---|---|---------------------------|
| VCU #: 575 | UNIT #: 408 | QUARTER QUAD: D3SE | PHOTO YR/#: 1991/1090-202 |
| ACRES: 69.2 | VOL.: 1543.1 MBF | LOGGING SYSTEM: Swingyarder/ | Highlead with 100' Tower |
| LANDSCAPE ZONE: Unit is within the Baird Peak Corridor. | | | |
| Timber/Vegetation | Field Review: M. Case 7/23/93 | Office Review: J. Goering | |
| Species composition predominantly hemlock with some cedar. Few spruce are present. Regeneration predominantly hemlock with a few spruce but is generally lacking cedar. Dense understory vegetation. Moderately low volume, mixed species, multi-canopy stand with < 50% canopy closure. Rocky, relatively thin soils in some areas. | | | |
| Logging/Transportation | Field Review: J. Doyle/ J. Graves, 7/21/93 | Office Review: E. Urstadt | |
| Unit is accessed by Road #70-82-3.1 and four short spurs. Two settings will use a swing yarder with running skyline and two will use a 100 foot tower with highlead system. Ninety percent of unit is downhill logging. This unit has 6000 feet of 100 foot stream buffers. Also, a Class II stream in the center-east section needs a 100 foot buffer. Partial cut is not possible in the highlead settings. Economics are fair. | | | |
| Watershed/Fisheries | Field Review: G. Jackson, 7/14/93 | Office Review: T. Stewart | |
| This unit is bounded on the southwest and northwest sides by fish-bearing, Class I streams. A Class I stream bisects the unit. 100' buffers are required on all. There are extensive areas of muskeg within the unit boundary. | | | |
| Soil/Geology | Field Review: G. Jackson, 7/14/93 | Office Review: T. Stewart | |
| Moderate slopes, stable soils. No special concerns noted. | | | |
| Wildlife | Field Review: G. Jackson, 7/14/93 | Office Review: M. Hall | |
| Moderate deer use. Bear sign throughout unit. No special concerns noted. Open canopy forest and meadows. Retain Level 1 structure. Contiguous old-growth. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross | |
| Unit is not seen from Honker Canoe Route. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Class I streams on southwest, northwest, and center of unit require 100' TTRA buffers. Class II stream in southeast portion of unit requires 100' TTRA buffer also. Type B and Type D clearcut. Southern boundary west of bisecting stream was extended south into notch between two Class I streams - not flagged in field. Mitigation measures for this unit are as follows: F4, F6, F8, F10, W1, and W4. | | | |

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

VCU : 575

UNIT : 409

QUAD : D3-SE



- Revised Control Lake Project Boundary
- Post-Field Unit Boundary w/ Setting Codes
- Other Post-Field Unit Boundaries
- USFS Timber Types for Volc 4-7
- Eagle Tree Buffer of 330ft
- Existing & Rebuilt Roads
- F.S. Roads Under Construction
- Post-Field Proposed Roads
- Ahmu-Class 1 & Stream Chantypes
- Ahmu-Class 2 & Stream Chantypes
- Ahmu-Class 3 & Stream Chantypes
- Channel Type Change

- Lakes and Ponds
- Second Growth Units
- MMI 4
- McGilvery > 41
- Landings
- Stream & Lake NoCUT Buffers

May 13, 1994

.5 MILE



















CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

| | | | |
|---|--|---|---------------------------|
| VCU #: 575 | UNIT #: 409 | QUARTER QUAD: D3SE | PHOTO YR/#: 1991/1090-202 |
| ACRES: 28.9 | VOL.: 763.9 MBF | LOGGING SYSTEM: Swingyard/Running Skyline | |
| LANDSCAPE ZONE: Unit is located in Honker Watershed on border of Baird Peak Corridor. | | | |
| Timber/Vegetation | Field Review: G. Hedin, 6/30/93 | Office Review: J. Goering | |
| Species composition predominantly hemlock with some spruce. Few cedar are present. Regeneration predominantly hemlock but includes some spruce. Rock bluffs on the higher elevations of the unit. Slope instability/failure potential existing due to steep slope and soil/water movement. Steep slope, relatively shallow soils, and poor soil drainage areas within unit. Poor regeneration due to high elevation, slope and soils. | | | |
| Logging/Transportation | Field Review: S. Field/B. Flatz | Office Review: J. Doyle/E. Urstadt | |
| Unit is accessed by Road #70-82-11.1A. The field engineer suggests relocating road lower down in unit to increase deflection and reduce construction costs. Profiles indicate that the flagged unit boundary will not meet partial suspension. Additional profiles will be needed to determine correct eastern boundary. Yarding is downhill and swing yarder with running skyline is recommended. Economics are fair. | | | |
| Watershed/Fisheries | Field Review: R. Rogers, 6/21/93 | Office Review: G. McNaughton | |
| Small Class III stream (WQ) green/white flagging - directional fall/split log. | | | |
| Soil/Geology | Field Review: R. Rogers, 6/21/93 | Office Review: G. McNaughton | |
| Large slide present north of (not in) unit and thin, organic, wet soils noted throughout unit. Steeper to east with cliffs. Achieve as much suspension as possible to minimize soil disturbances. | | | |
| Wildlife | Field Review: H. Sloan/R. Rogers, 6/21/93 | Office Review: M. Hall/G. McNaughton | |
| No concerns. Level I snag retention. Goose sign in muskeg north to northeast and west of unit. Low wildlife use overall. Retain Level 1 structure; contiguous old-growth. Fledgling hawk observed on ground. No species identification. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Not seen from Honker Canoe Route. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Unit excludes slide to north and steeper (> 75%) slopes to east. Split yard Class III stream. Partial suspension not possible in upper part of unit as laid out. Recommend lowering upper (eastern) boundary to maximize partial suspension for cable logging. Original road location (in field) required full bench construction on mid-slope. Lower road location to increase possible suspension. This would eliminate the need for full bench, end haul, and would facilitate yarding. Lower road would also be better location for landings for future helicopter logging. Upper portion of unit should be helicopter logged - include with future helicopter unit on upper slope (note R575-410 retention VQO required above 1,200' to 1,400' elevation). Unit should be investigated for possible goshawk presence due to juvenile hawk sighting. Type A clearcut. Mitigation measures for this unit are as follows: F1, F6, V1, W5, and W9. | | | |

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

QUAD : D3-SE



- | | | | |
|---|---|---|-----------------------------|
|  | Revised Control Lake Project Boundary |  | Lokes and Ponds |
|  | Post-Field Unit Boundary w/ Setting Codes |  | Second Growth Units |
|  | Other Post-Field Unit Boundaries |  | MMI 4 |
|  | USFS Timber Types for Volc 4-7 |  | McGilvery > 41 |
|  | Eagle Tree Buffer of 330ft |  | Landings |
|  | Existing & Rebuilt Roads |  | Stream & Lake NoCUT Buffers |
|  | F.S. Roads Under Construction | | |
|  | Post-Field Proposed Roads | | |
|  | Ahmu-Class 1 & Stream Chantypes | | |
|  | Ahmu-Class 2 & Stream Chantypes | | |
|  | Ahmu-Class 3 & Stream Chantypes | | |
|  | Chonnel Type Change | | |

.5 MILE

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

| | | | |
|---|--|---|---------------------------------|
| VCU #: 575 | UNIT #: 410 | QUARTER QUAD: D3SE | PHOTO YR/#: 1991/17-1090-113 |
| ACRES: 32.3 | VOL.: 1262.9 MBF | LOGGING SYSTEM: Swingyarder/Running skyline | |
| LANDSCAPE ZONE: Unit is within the Honker Watershed. | | | |
| Timber/Vegetation | Field Review: B. Hasebe, 7/3/93 | Office Review: J. Goering | |
| Species composition includes hemlock, spruce, and cedar. Predominantly hemlock regeneration. Alaska yellow-cedar decline evident. Little to no mistletoe evident in canopy. Shallow soils overlying bedrock. Many small water drainage areas within unit. Windthrow damage present in southwestern corner of unit due to shallow soils and poor soil drainage. | | | |
| Logging/Transportation | Field Review: S. Field/B. Flatz, 7/02/93 | Office Review: M. Whitty | |
| Unit is accessed by Rd #70-82-12, segment B. Four landings will be used for the swingyarder. A running skyline is recommended. 2/3 is downhill logging and 1/3 is uphill. A possible blind lead is in the upper north boundary (northwest corner). Partial suspension is required and possible. Blowdown may be a problem on the south boundary. Economics are good. Quality control was done on this unit by C. Barnhart and E. Urstadt. | | | |
| Watershed/Fisheries | Field Review: R. Rogers, 6/21/93 | Office Review: G. McNaughton | |
| Streams 4, 5, and 6 are Class III; directional fall and split yard away from streams. Stream 7 is Class I; needs 100' TTRA buffer. | | | |
| Soils/Geology | Field Review: R. Rogers, 6/21/93 | Office Review: G. McNaughton | |
| Achieve partial suspension yarding over entire unit as much as possible to minimize disturbance of thin, organic, wet soils. Small debris flow deposit in ephemeral channel flagged G/W. Directional fall and split yard away to avoid remobilizing flow. | | | |
| Wildlife | Field Review: H. Sloan, 6/21/93 | Office Review: M. Hall | |
| No concerns. Structure retention Level 1. Goshawk survey conducted - no detections. Juvenile red-tailed hawk observed south of unit at end of road. Woodpecker - audible detection. Level 1 structure retention. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit not seen from any priority travel route or use area. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Reconsider final design of this unit prior to final layout, due to blowdown potential. Blind lead and selective cut approximately 100' from Class III stream on north boundary provides wildlife island. Split yard Class III stream in unit. Achieve partial suspension to extent possible. Type A clearcut. Mitigation measures for this unit are as follows: F5, F6, F8, W1, and W4. | | | |

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

VCU : 575

UNIT : 411

QUAD : D3-SE



- Revised Control Lake Project Boundary
- Post-Field Unit Boundary w/ Setting Codes
- Other Post-Field Unit Boundaries
- USFS Timber Types for Volc 4-7
- Eagle Tree Buffer of 330ft
- Existing & Rebuilt Roads
- F.S. Roads Under Construction
- Post-Field Proposed Roads
- Ahmu-Class 1 & Stream Chontypes
- Ahmu-Class 2 & Stream Chontypes
- Ahmu-Class 3 & Stream Chontypes
- Chonnel Type Change

- Lakes and Ponds
- Second Growth Units
- MMI 4
- McGilvery > 41
- Landings
- Stream & Lake NoCUT Buffers

May 13, 1994

.5 MILE

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

| | | | |
|---|--|---|------------------------------------|
| VCU #: 575 | UNIT #: 411 | QUARTER QUAD: D3SE | PHOTO YR/#: 1991/17-1090-115-91 |
| ACRES: 18.4 | VOL.: 560.9 MBF | LOGGING SYSTEM: Slackline System | |
| LANDSCAPE ZONE: Unit is within Honker Watershed. | | | |
| Timber/Vegetation | Field Review: G. Hedin, 7/2/93 | Office Review: J. Goering | |
| Species composition predominantly hemlock with some spruce. Regeneration predominantly hemlock but includes some spruce. Steep slope, rocky, relatively thin soils and exposed rock. Some poor soil drainage areas. Poor regeneration in the northwest corner due to poor soil drainage. | | | |
| Logging/Transportation | Field Review: S. Field/B. Flatz, 6/30/93 | Office Review: E. Urstadt | |
| Unit is accessed by Road #70-82-12. Ninety percent of the unit is downhill logging and partial suspension is suggested by the soils specialist. Therefore, a slackline system with 70 foot tower is recommended. There is a blind lead in the SE corner and the west boundary should be moved west to timber type edge. More profiles are needed to assure partial suspension. Large boulders along upper boundary are a safety hazard! Economics are good. | | | |
| Watershed/Fisheries | Field Review: B. Romey, 6/18/93 | Office Review: G. McNaughton | |
| Stream 1 is a Class III; directional fall away from stream. | | | |
| Soil/Geology | Field Review: M. Minnillo, 6/18/93 | Office Review: G. McNaughton | |
| Upper slopes steep, generally 65% to 75% slope. Unstable shallow soils with much windthrow. Several boulders and devil's club chutes throughout unit, especially along southern unit boundary. Lower eastern boundary to 1,400'. | | | |
| Wildlife | Field Review: M. Minnillo, 6/18/93 | Office Review: M. Hall | |
| Maintain structure along western unit boundary, otherwise no concerns. Level 1 retention. Wolf kill; deer remains in unit. Contiguous old-growth with alpine habitat. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit not seen from any priority travel routes or use areas. Maximum Modification VQO. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Directional fall and yard away from Class III stream on southwest boundary. Shallow, wet, organic soils should receive at least partial suspension over most of unit. Profiles run indicate partial, in northeast Honker area suspension only achieved in lower portion of unit. If further profiles indicate partial suspension not possible, then helicopter logging is necessary. Alternatively, partial suspension corridors could be logged leaving areas without partial suspension as wildlife leave islands. Type A clearcut. Mitigation measures for this unit are as follows: F3, F6, F8, and W4. | | | |

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

VCU : 575

UNIT : 412

QUAD : D3-SE



- Revised Control Lake Project Boundary
- Post-Field Unit Boundary w/ Setting Codes
- Other Post-Field Unit Boundaries
- USFS Timber Types for Volc 4-7
- Eagle Tree Buffer of 330ft
- Existing & Rebuilt Roads
- F.S. Roads Under Construction
- Post-Field Proposed Roads
- Ahmu-Class 1 & Stream Chantypes
- Ahmu-Class 2 & Stream Chantypes
- Ahmu-Class 3 & Stream Chantypes
- Channel Type Change

- Lakes and Ponds
- Second Growth Units
- MMI 4
- McGilvery > 41
- Landings
- Stream & Lake NoCUT Buffers

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0.5 MILE

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

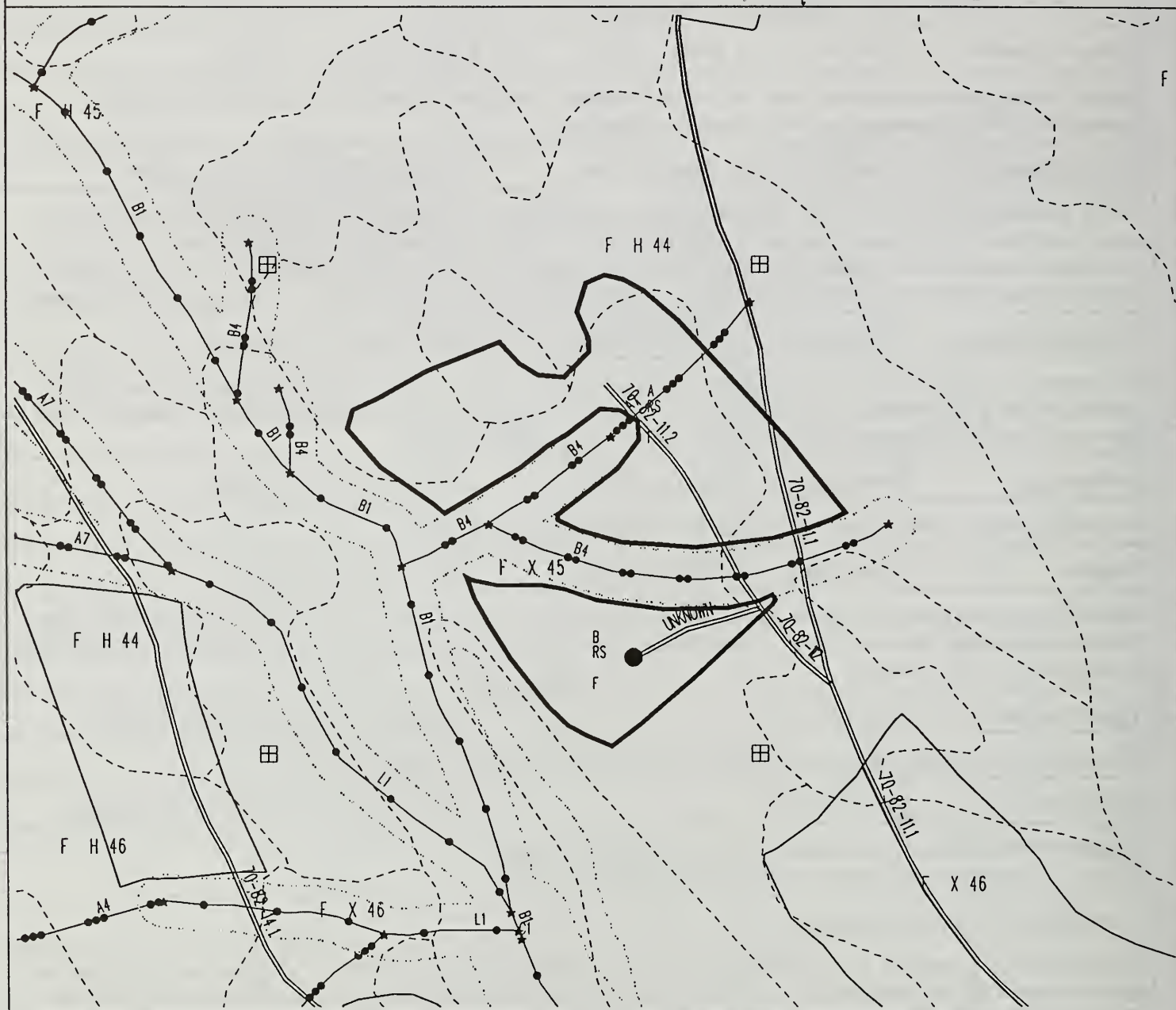
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|---|-----------------------------------|---|---------------------------|
| VCU #: 575 | UNIT #: 412 | QUARTER QUAD: D3SE | PHOTO YR/#: 1991/1090-115 |
| ACRES: 30.9 | VOL.: 731.2 MBF | LOGGING SYSTEM: Highlead | |
| LANDSCAPE ZONE: Unit is within Honker Watershed. | | | |
| Timber/Vegetation | Field Review: J. Miller, 7/3/93 | Office Review: J. Goering | |
| Species composition predominantly cedar with some hemlock. Few spruce are present. Predominantly hemlock regeneration. Windthrow damage evident throughout the unit. | | | |
| Logging/Transportation | Field Review: S. Field/D. Keister | Office Review: J. Doyal/E. Urstadt | |
| Unit is accessed by Road #70-82-14. Poor tail stumps on upper boundary indicate that a highlead system with 70 foot tower would work best. Seventy percent of logging is downhill. The north one-half of unit has blowdown, thin soils, pistol-butted trees and low volume. Recommend north one-half of unit be excluded from harvest. Two short sections of 100 foot stream buffer are on SW and SE corners. Feather edges to minimize blowdown. Economics are fair to good. | | | |
| Watershed/Fisheries | Field Review: J. Metzler, 8/09/93 | Office Review: T. Stewart | |
| The streams along the east and west boundaries are Class IIa below 550' elevation and Class III above. The Class IIa portions require a 100' buffer. The channels are not incised; trees should be directional fall away from stream. There are four small Class III tributaries in the unit that should be split yarded if practical. | | | |
| Soil/Geology | Field Review: J. Metzler, 8/09/93 | Office Review: T. Stewart | |
| No special concerns. Slopes are < 60% with no evidence of slumps or slides. | | | |
| Wildlife | Field Review: J. Metzler, 8/09/93 | Office Review: M. Hall | |
| Abundant snags and down-trees above approximately 700' elevation. Unit is located on a previously unharvested slope, with subalpine habitat above and valley bottom below. Northern three-toed woodpecker observed in unit. Contiguous old-growth tract. Level 1 retention. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit is not seen from any priority travel routes or use areas. Maximum Modification VQO. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| In northern half of unit look for opportunities to leave non-merchantable timber outside of yarding corridors to serve as leave islands. Class IIa stream is not within unit. Split yard and directional fall away from streams on margin of unit. Class III streams within unit do not require split yarding; however, achieve as much suspension over creeks within unit as is feasible. Because of windthrow potential, recommend Type A clearcut. Mitigation measures for this unit are as follows: F6, F8, and W4. | | | |

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

VCU : 575

UNIT : 413

QUAD : D3-SE



- Revised Control Lake Project Boundary
- Post-Field Unit Boundary w/ Setting Codes
- Other Post-Field Unit Boundaries
- USFS Timber Types for Volc 4-7
- Eagle Tree Buffer of 330ft
- Existing & Rebuilt Roads
- F.S. Roads Under Construction
- Post-Field Proposed Roads
- Ahmu-Class 1 & Stream Chontypes
- Ahmu-Class 2 & Stream Chontypes
- Ahmu-Class 3 & Stream Chontypes
- Channel Type Change

- Lakes and Ponds
- Second Growth Units
- MMI 4
- McGilvery > 41
- Landings
- Stream & Lake NoCUT Buffers

May 13, 1994

0.5 MILE

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

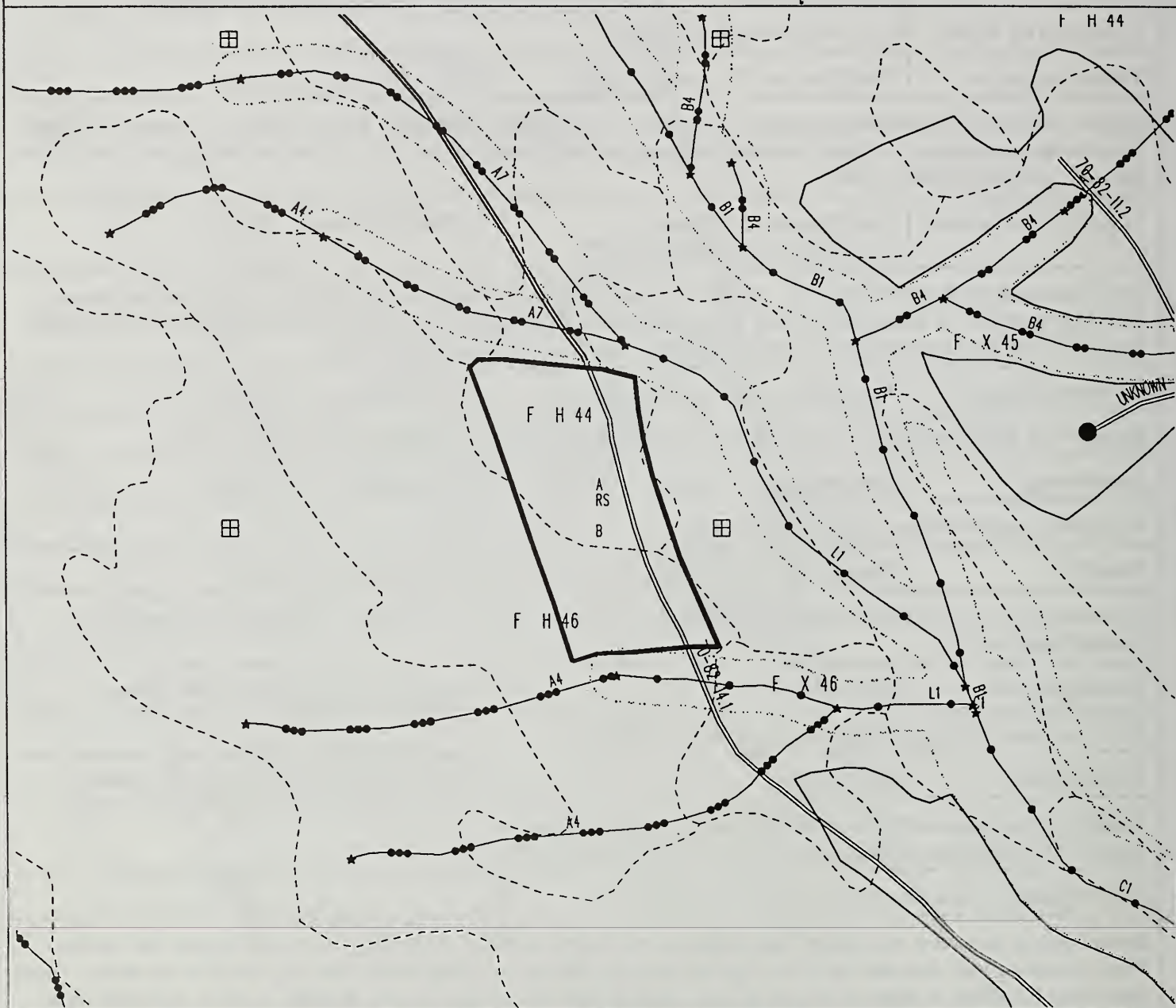
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| VCU #: 575 | UNIT #: 413 | QUARTER QUAD: D3SE | PHOTO YR/#: 1991/1090-201 |
| ACRES: 34.6 | VOL.: 769 MBF | LOGGING SYSTEM: Swingyarder/Running Skyline | |
| LANDSCAPE ZONE: Unit is within Honker Watershed. | | | |
| Timber/Vegetation | Field Review: B. Hasebe, 6/28/93 | Office Review: J. Goering | |
| Species composition predominantly cedar with hemlock. Little spruce is present. Regeneration predominantly hemlock but includes some spruce. Muskeg incursions incorporated with mixed species; low volume timber in some areas. Some thin soil, poor soil drainage areas. | | | |
| Logging/Transportation | Field Review: B. Webster/ K. Martin/B. Wilkinson, 6/23/93 | Office Review: M. Whitty | |
| Unit is accessed by Road #70-82-11.2. An IDT decision to extend unit to the south requires a short spur that has not been field verified. A swing yarder using running skyline is recommended. Lift trees will be needed for some yarding. Partial cut is not recommended due to lack of adequate suspension. Economics are fair. | | | |
| Watershed/Fisheries | Field Review: M. Minnillo, 6/21/93 | Office Review: T. Stewart | |
| Require 100' buffer on Class II stream on south unit boundary and flowing southwest from center of unit. | | | |
| Soils/Geology | Field Review: M. Minnillo, 6/21/93 | Office Review: T. Stewart | |
| No stability concerns noted. 25% to 30% slopes. | | | |
| Wildlife | Field Review: C. Confer, 6/21/93 | Office Review: M. Hall | |
| No concerns. Level 1 structure retention. Goshawk survey conducted - no detections. High deer use. Sapsucker cavities identified. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit is not seen from any priority travel routes or use areas. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Extend unit on southwest side below Class II stream not flogged in field; (both Class II streams require 100' buffers). When extending unit, note that the Class I stream requires 100' no cut TTRA buffer and 100' selective cut buffer. Split yard Class III stream in upper north part of unit. Type F seed tree harvest of unit. Remove hemlock and some cedar. Leave spruce and some cedar as seed trees. Due to lack of adequate suspension, seed trees may need to be left in small wedges adjacent to yarding corridors. Extension will require new spur. Mitigation measures include: F5, F6, F8, F10 and W2. | | | |

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

VCU : 575

UNIT : 414

QUAD : D3-SE



- Revised Control Lake Project Boundary
- Past-Field Unit Boundary w/ Setting Codes
- Other Past-Field Unit Boundaries
- USFS Timber Types for Volc 4-7
- Eagle Tree Buffer of 330ft
- Existing & Rebuilt Roads
- F.S. Roads Under Construction
- Post-Field Proposed Roads
- Ahmu-Class 1 & Stream Chantypes
- Ahmu-Class 2 & Stream Chantypes
- Ahmu-Class 3 & Stream Chantypes
- Channel Type Change

- Lakes and Ponds
- Second Growth Units
- MMI 4
- McGilvery > 41
- Landings
- Stream & Lake NoCUT Buffers

May 13, 1994

.5 MILE

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

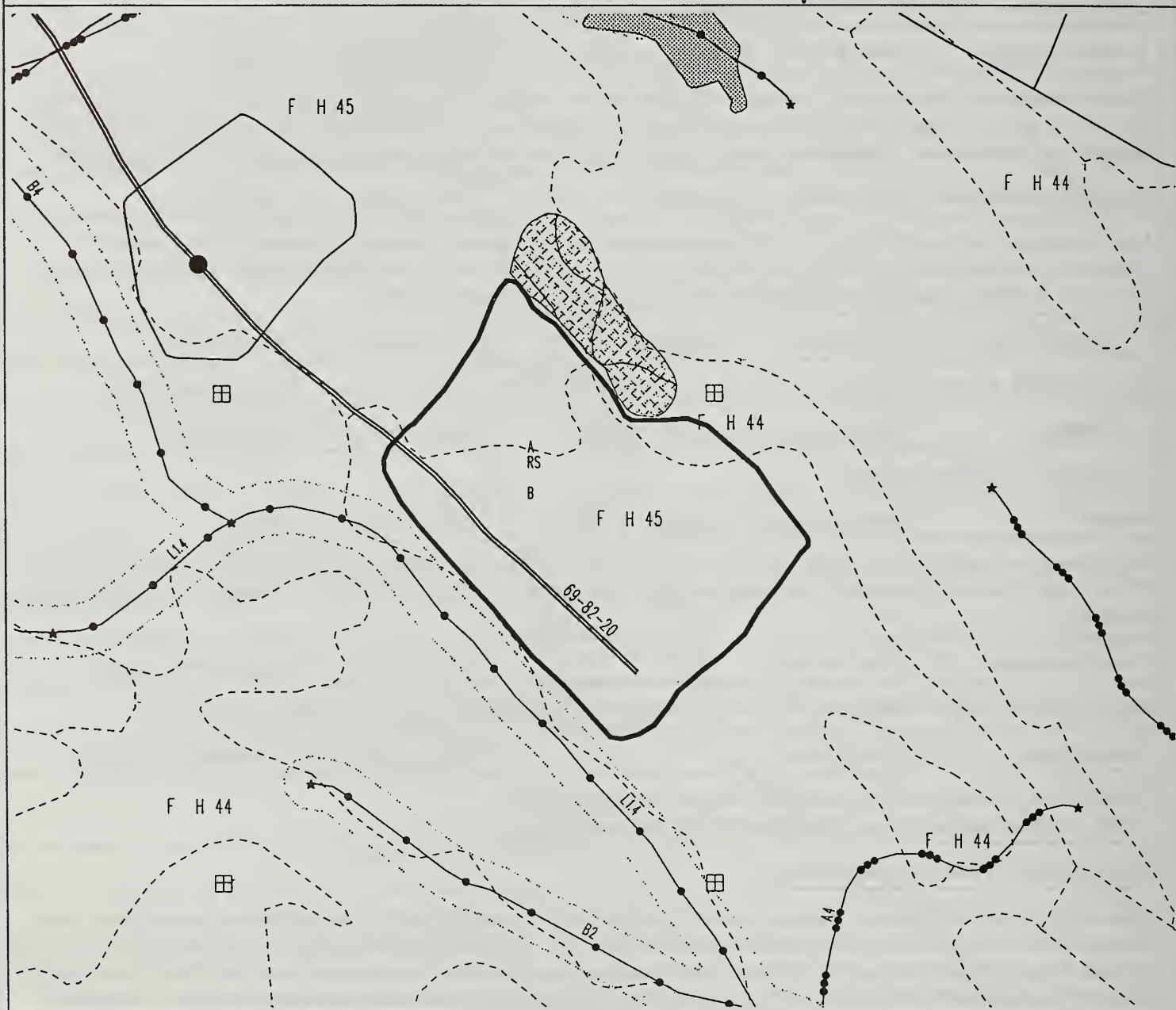
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|--|--|---|---------------------------|
| VCU #: 575 | UNIT #: 414 | QUARTER QUAD: D3NE | PHOTO YR/#: 1991/1090-201 |
| ACRES: 16.1 | VOL.: 684.7 MBF | LOGGING SYSTEM: Swingyarder/Running Skyline | |
| LANDSCAPE ZONE: Unit is within proposed Honker Block. | | | |
| Timber/Vegetation | Field Review: B. Hasebe, 6/29/93 | Office Review: J. Goering | |
| Species composition predominantly hemlock with some spruce. Regeneration predominantly hemlock but includes small amounts of spruce. Slope instability/failure potential existing due to soil water movement. Rocky, relatively thin soils, exposed rock and bedrock. Windthrow damage evident throughout the unit due to thin soils and soil water movement. | | | |
| Logging/Transportation | Field Review: S. Field/B. Flatz, 6/28/93 | Office Review: M. Whitty | |
| Unit is accessed by Road #70-82-14.1. The recommended logging system is running skyline with swing yarder. Maximum yarding distance is 400 feet with 80% downhill logging. Blowdown may be a problem. Leaving nonmerch cedar near boundary should help alleviate blowdown potential. Economics are fair. | | | |
| Watershed/Fisheries | Field Review: M. Minnillo, 6/24/93 | Office Review: G. McNaughton | |
| Class I streams on north and south boundary need a 100' TTRA buffer. Class III stream does not need buffer. | | | |
| Soil/Geology | Field Review: J. Metzler, 8/09/93 | Office Review: G. McNaughton | |
| Low slopes, no stability problems. | | | |
| Wildlife | Field Review: M. Minnillo, 6/24/93 | Office Review: M. Hall | |
| High beaver use below unit. No other major concerns. Level 1 structure retention. Goshawk survey conducted in Units 575-413 and 575-414; no detection. Woodpecker sign identified. Contiguous old-growth. Muskeg/beaver pond along east boundary. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Keep below 650' due to visibility from Forest Service cabin at Lake Galea. Maximum Modification VQO. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Unit as laid out in field stopped at stream on north side that may be small Class III. In final design confirm that north boundary is at Class II stream (100' buffer required on Class II). Windthrow hazard minimized opportunity for selective harvest; however, leave nonmerchantable and cedar trees near unit boundary for additional structure (Type B clearcut). If road extends to Unit 575-407 there will be a variety of opportunities for independent sales along the road. Mitigation measures for this unit are as follows: F5, F8, F10, and W4. | | | |

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

VCU : 575

UNIT : 415

QUAD : D3-SW



- Revised Control Lake Project Boundary
- Post-Field Unit Boundary w/ Setting Codes
- Other Post-Field Unit Boundaries
- USFS Timber Types for Volc 4-7
- Eagle Tree Buffer of 330ft
- Existing & Rebuilt Roads
- F.S. Roads Under Construction
- Post-Field Proposed Roads
- Ahmu-Class 1 & Stream Chantypes
- Ahmu-Class 2 & Stream Chantypes
- Ahmu-Class 3 & Stream Chantypes
- Chonnel Type Change

- Lakes and Ponds
- Second Growth Units
- MMI 4
- McGilvery > 41
- Landings
- Stream & Lake NoCUT Buffers

May 13, 1994

.5 MILE

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

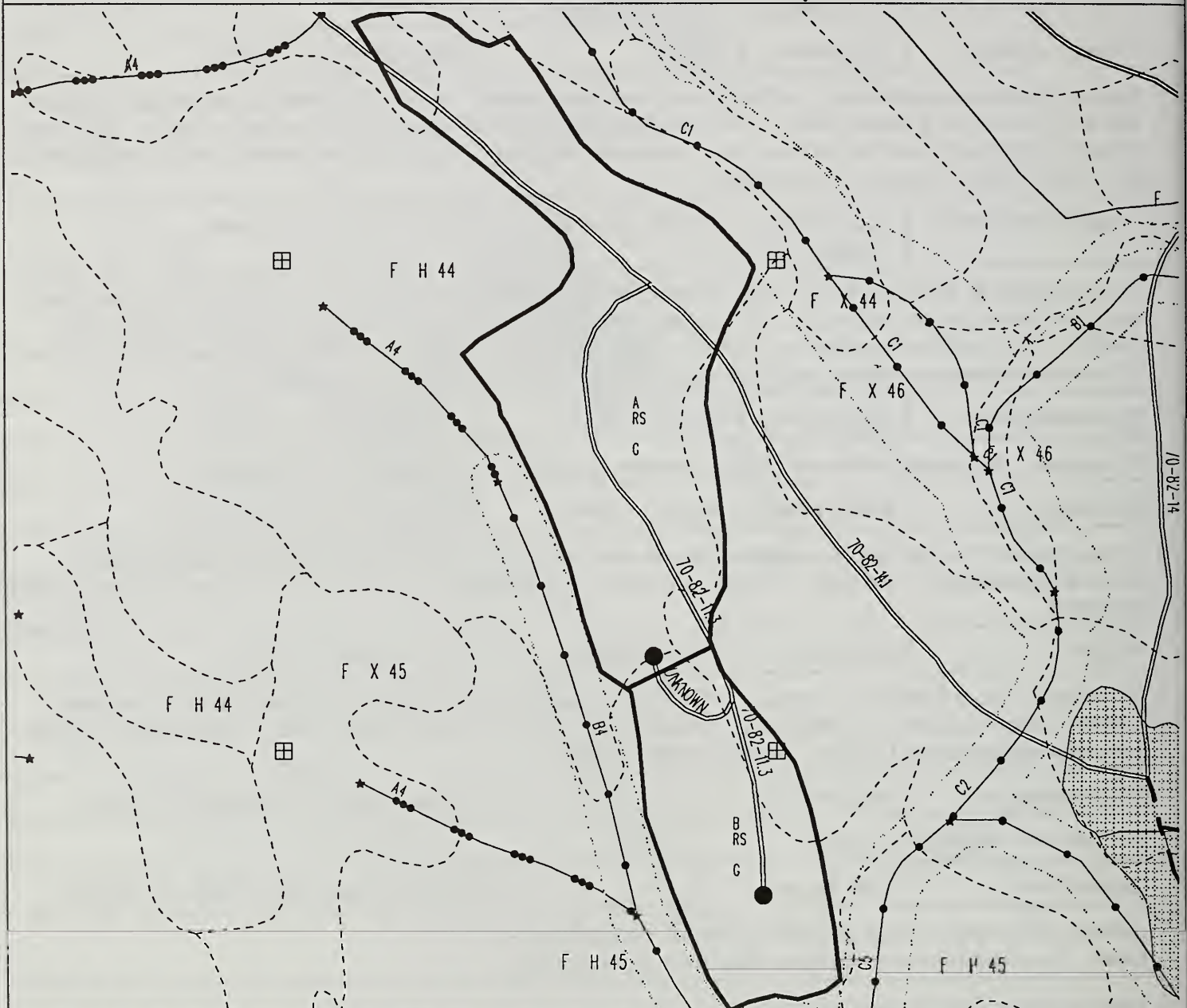
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| VCU #: 575 | UNIT #: 415 | QUARTER QUAD: D3SW | PHOTO YR/ #: 1991/690-169 |
| ACRES: 38.1 | VOL.: 1271.8 MBF | LOGGING SYSTEM: Swingyarder/Running Skyline | |
| LANDSCAPE ZONE: Unit is within proposed Honker Block. | | | |
| Timber/Vegetation | Field Review: T. Stecher | Office Review: J. Goering | |
| Species composition predominantly hemlock but includes cedar and some spruce. Regeneration predominantly hemlock with a few spruce but is lacking cedar. Low to moderate amounts of mistletoe infection evident in canopy. High erosive potential in northeast corner due to recent slope failure and steep slope. Light windthrow damage evident throughout the unit. Some thin soil, poor soil drainage areas. | | | |
| Logging/Transportation | Field Review: S. Field/B. Flatz, E. Urstadt, 6/28/93 | Office Review: E. Urstadt | |
| Unit is accessed by Road #69-82-20. The recommended logging system is running skyline with a swing yarder. Partial cut is not possible due to steep slopes. The northeast boundary was placed below unstable slopes indicated by soils specialist. The southwest boundary has a 100 foot buffer (stream class should be verified during final layout). Leaving a 50 foot strip of nonmerch timber along boundaries can help minimize blowdown. Economics are good. | | | |
| Watershed/Fisheries | Field Review: R. Rogers, 7/14/93 | Office Review: T. Stewart | |
| No concerns. No streams within unit. Class I stream at southwest border requires 100' TTRA buffer. | | | |
| Soil/Geology | Field Review: R. Rogers, 7/14/93 | Office Review: T. Stewart | |
| Drop northeast 1/8 of unit due to avalanches. Recommend unit boundary is lowered to 800' elevation in landslide potential initiation zone. Unit below 800' recommended to receive partial suspension. Stay away from existing landslides as marked. | | | |
| Wildlife | Field Review: H. Sloan, 7/14/93 | Office Review: M. Hall | |
| No concerns. Level I structure retention. 7/15/93 dawn murrelet survey conducted - occupancy behavior confirmed. Goshawk survey conducted - no detections. Contiguous old-growth. Western hemlock stand. Small muskegs surround unit within approximately 1/8 mile. Two fresh wolf kill (deer). | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Not seen from Honker Canoe Route. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Unit boundary lowered below unstable portions. Partial suspension recommended. Stream on southwest side requires 100' TTRA buffer. Windthrow hazard plus mistletoe limit opportunity for selective cut. Swingyard running skyline system recommended. Type B clearcut. Mitigation measures for this unit are as follows: F1, F3, F5, F8, and W4. | | | |

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

VCU : 575

UNIT : 417

QUAD : D3-SE



- Revised Control Lake Project Boundary
- Post-Field Unit Boundary w/ Setting Codes
- Other Post-Field Unit Boundaries
- USFS Timber Types for Volc 4-7
- Eagle Tree Buffer of 330ft
- Existing & Rebuilt Roads
- F.S. Roads Under Construction
- Post-Field Proposed Roads
- Ahmu-Class 1 & Stream Chantypes
- Ahmu-Class 2 & Stream Chantypes
- Ahmu-Class 3 & Stream Chantypes
- Channel Type Change

- Lakes and Ponds
- Second Growth Units
- MMI 4
- McGilvery > 41
- Landings
- Stream & Lake NoCUT Buffers

May 13, 1994

.5 MILE

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

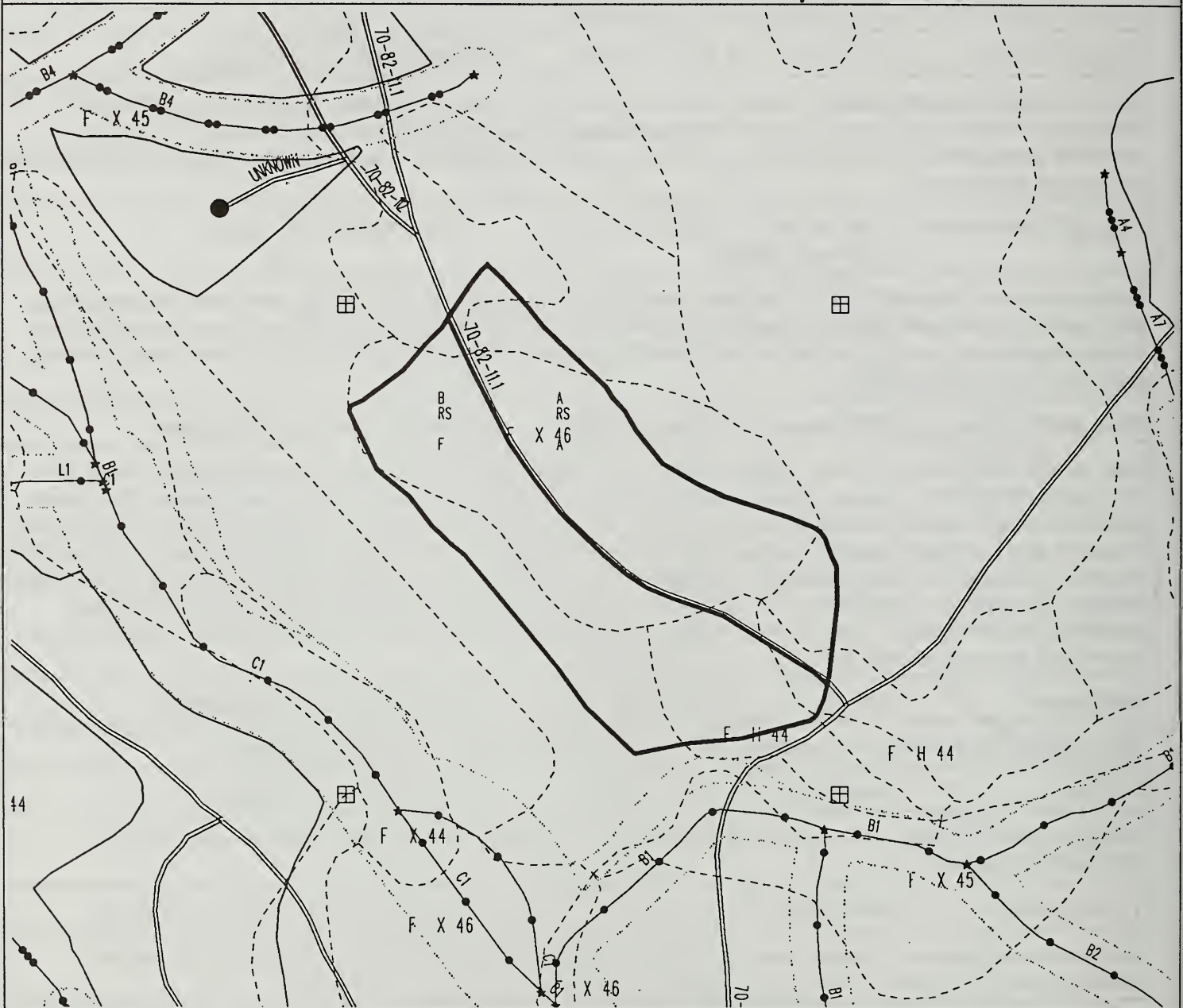
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| VCU #: 575 | UNIT #: 417 | QUARTER QUAD: D3SE | PHOTO YR/#: 1991/1090-200 |
| ACRES: 59.2 | VOL.: 774.5 MBF | LOGGING SYSTEM: Swingyarder/Running Skyline | |
| LANDSCAPE ZONE: Unit is within proposed Honker Block. | | | |
| Timber/Vegetation | Field Review: G. Hedin, 6/28/93 | Office Review: J. Goering | |
| Species composition predominantly hemlock with some cedar. Few spruce are present. Regeneration predominantly hemlock but includes some spruce. Low to moderate amounts of mistletoe infection evident in canopy. Muskeg incursions incorporated with mixed species, low volume timber in some areas. Harvest all mistletoe infected hemlock and cut infected regeneration. | | | |
| Logging/Transportation | Field Review: S. Field/B. Flatz/ E. Urstadt, 6/28/93 | Office Review: M. Whitty | |
| Unit is accessed by Road #82-70-14.1 and three short spurs. The logging system is swing yarder with running skyline. Fifty percent of yarding is uphill; all yarding is less than 500 feet. Partial suspension will occur over most of the unit. Partial cut should be possible. A 200 foot stream buffer is on the NE boundary and a 100 foot stream buffer is on the south edge. Economics are fair. | | | |
| Watershed/Fisheries | Field Review: E. Ablow, 6/22/93 | Office Review: G. McNaughton | |
| Four streams were found in the unit. Stream 1 is a Class I stream that flows along the southern boundary, requiring a 100' buffer (BMP 12.6). Measure distance of the buffer from the top of the slope not the stream channel. The channel is deeply incised and needs the added 40' of protection along the riparian zone. Coho fry were found rearing in the stream. Streams 2 and 3 are small Class III muskeg channels that are in the center of the unit. They do not require any protection; however, care should be taken to avoid the muskegs in the unit. Stream 4 is a Class I stream that flows along the northern boundary. It requires a 200' buffer (BMP 12.6). This stream is braided. The buffer must be measured from the southern-most side channel. Coho fry were found in the side channels as well as in the main channel. Stream on west edge of unit also requires 100' buffer. | | | |
| Soil/Geology | Field Review: E. Ablow, 6/22/93 | Office Review: G. McNaughton | |
| The unit ranges from 5% to 40% gradient. The unit is stable and has no soil or geology concerns. | | | |
| Wildlife | Field Review: H. Sloan, 6/22/93 | Office Review: M. Hall | |
| Level 1 structure retention - no concerns. Goshawk survey conducted - no detections. Wetlands surround unit. Contiguous old-growth. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit is not seen from priority travel routes or use areas. Maximum Modification VQO. Parking area should be constructed on spur off main road to provide space for 3 to 4 cars for access to Twin Lakes. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Maintain buffers, as noted above, along Class I streams along southwest and south unit boundary. Exclude leave island on northwest corner of field designed unit in low volume timber. Selective log along road at north end of unit for approximately 800'. Selective harvest (Type G shelterwood) remainder of unit also. Take mistletoe infected trees. Directionally fall and yard trees away from muskeg incursions in unit. Mitigation measures for this unit are as follows: F4, F8, W1, and W2. | | | |

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

VCU : 575

UNIT : 418

QUAD : D3-SE



- Revised Control Lake Project Boundary
- Post-Field Unit Boundary w/ Setting Codes
- Other Post-Field Unit Boundaries
- USFS Timber Types for Volc 4-7
- Eagle Tree Buffer of 330ft
- Existing & Rebuilt Roads
- F.S. Roads Under Construction
- Post-Field Proposed Roads
- Ahmu-Class 1 & Stream Chantypes
- Ahmu-Class 2 & Stream Chantypes
- Ahmu-Class 3 & Stream Chantypes
- Channel Type Change

- Lakes and Ponds
- Second Growth Units
- MMI 4
- McGilvery > 41

- Landings
- Stream & Lake NoCUT Buffers

May 13, 1994

.5 MILE

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

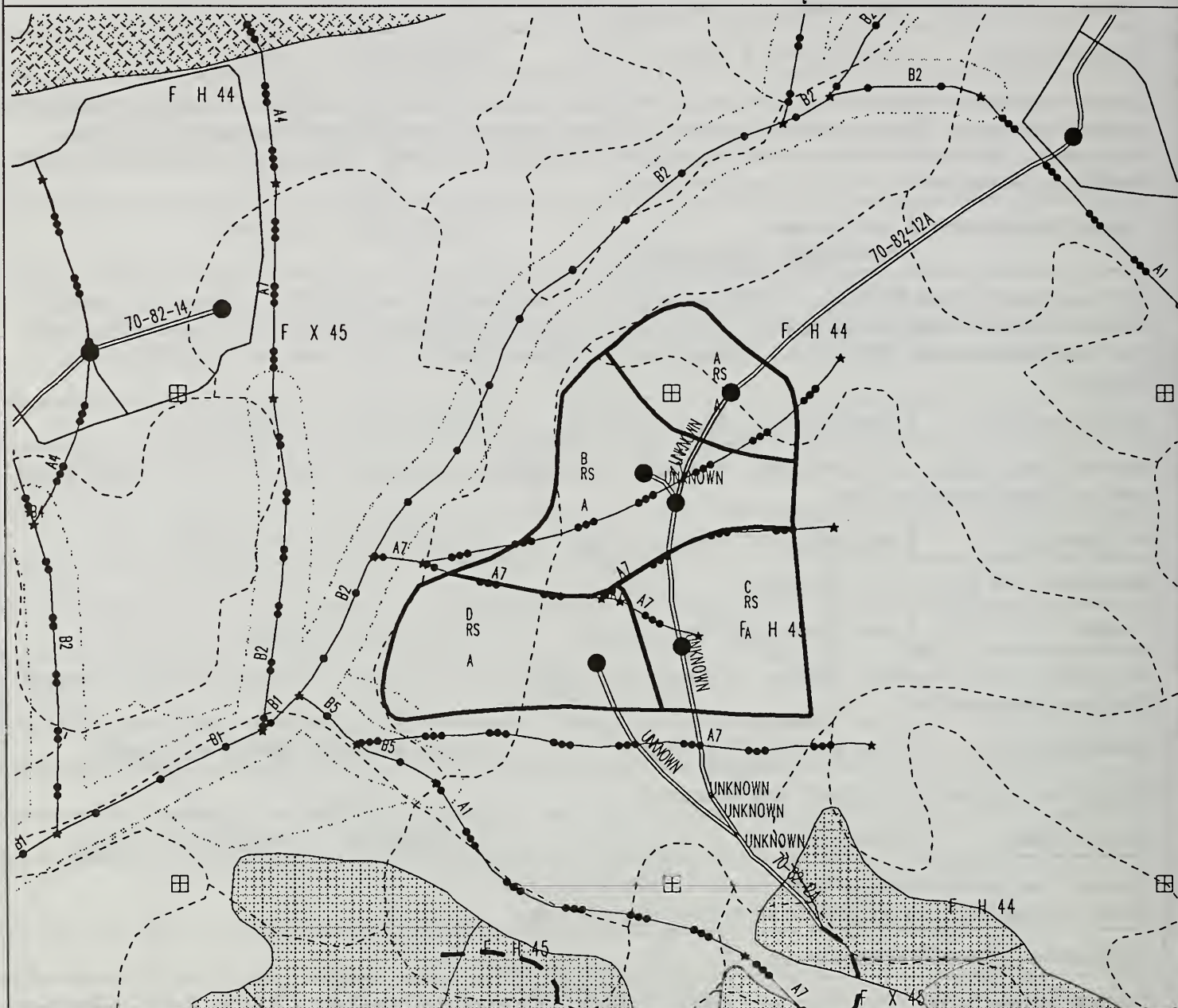
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| VCU #: 575 | UNIT #: 418 | QUARTER QUAD: D3SE | PHOTO YR/#: 1991/1090-115 |
| ACRES: 44.9 | VOL.: 1551.4 MBF | LOGGING SYSTEM: Swingyarder | |
| LANDSCAPE ZONE: Unit is within Honker Watershed. | | | |
| Timber/Vegetation | Field Review: T. Stecher, 8/7/93 | Office Review: J. Goering | |
| Species composition predominantly hemlock but includes some spruce and cedar. Regeneration predominantly hemlock but includes some spruce. Dense understory vegetation. Moderate amounts of mistletoe infection evident in canopy and regeneration. Harvest all mistletoe infected hemlock and cut infected regeneration. Consider promoting spruce and cedar regeneration through partial retention or seed tree harvest. | | | |
| Logging/Transportation | Field Review: E. Urstadt/D. Keister, 6/26/93 | Office Review: M Whitty | |
| Unit is accessed by Road #70-82-11.1. Swing yarding using running skyline is recommended. Sixty percent is uphill yarding and partial cutting is possible here. A small strip of timber was left on the SW boundary because of blind leads. Blowdown potential on the NW edge can be minimized with a feathered edge. Partial suspension is possible. Good economics. | | | |
| Watershed/Fisheries | Field Review: J. Knutzen, 6/19/93 | Office Review: G. McNaughton | |
| Southeast corner stream - 100' buffer plus 100' selective cut. Southwest corner stream needs 200' buffer. Buffer begins from 400' along side channel edge. | | | |
| Soil/Geology | Field Review: J. Knutzen, 6/19/93 | Office Review: G. McNaughton | |
| No concerns, low slope, no slide potential. | | | |
| Wildlife | Field Review: H. Sloan, 6/19/93 | Office Review: M. Hall | |
| No concerns. Level 1 structure retention. Goshawk survey conducted - no detections. Two hairy woodpecker observed. Contiguous old-growth tract. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit not seen from any priority travel route or use area. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Conduct seed tree harvest (Type F) on west setting. Partial cut not feasible in eastsetting - Type A. Retain co-dominant to intermediate spruce and cedar for leave trees. Cut all infected hemlock. Maintain buffers as indicated above. Mitigation measures for this unit are F8, F10, W2, and W5. | | | |

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

VCU : 575

UNIT : 419

QUAD : D3-SE



- Revised Control Lake Project Boundary
- Post-Field Unit Boundary w/ Setting Codes
- Other Post-Field Unit Boundaries
- USFS Timber Types for Volc 4-7
- Eagle Tree Buffer of 330ft
- Existing & Rebuilt Roads
- F.S. Roads Under Construction
- Post-Field Proposed Roads
- Ahmu-Class 1 & Stream Chantypes
- Ahmu-Class 2 & Stream Chantypes
- Ahmu-Class 3 & Stream Chantypes
- Channel Type Change

- Lakes and Ponds
- Second Growth Units
- MMI 4
- McGilvery > 41
- Landings
- Stream & Lake NoCUT Buffers

May 13, 1994

.5 MILE

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

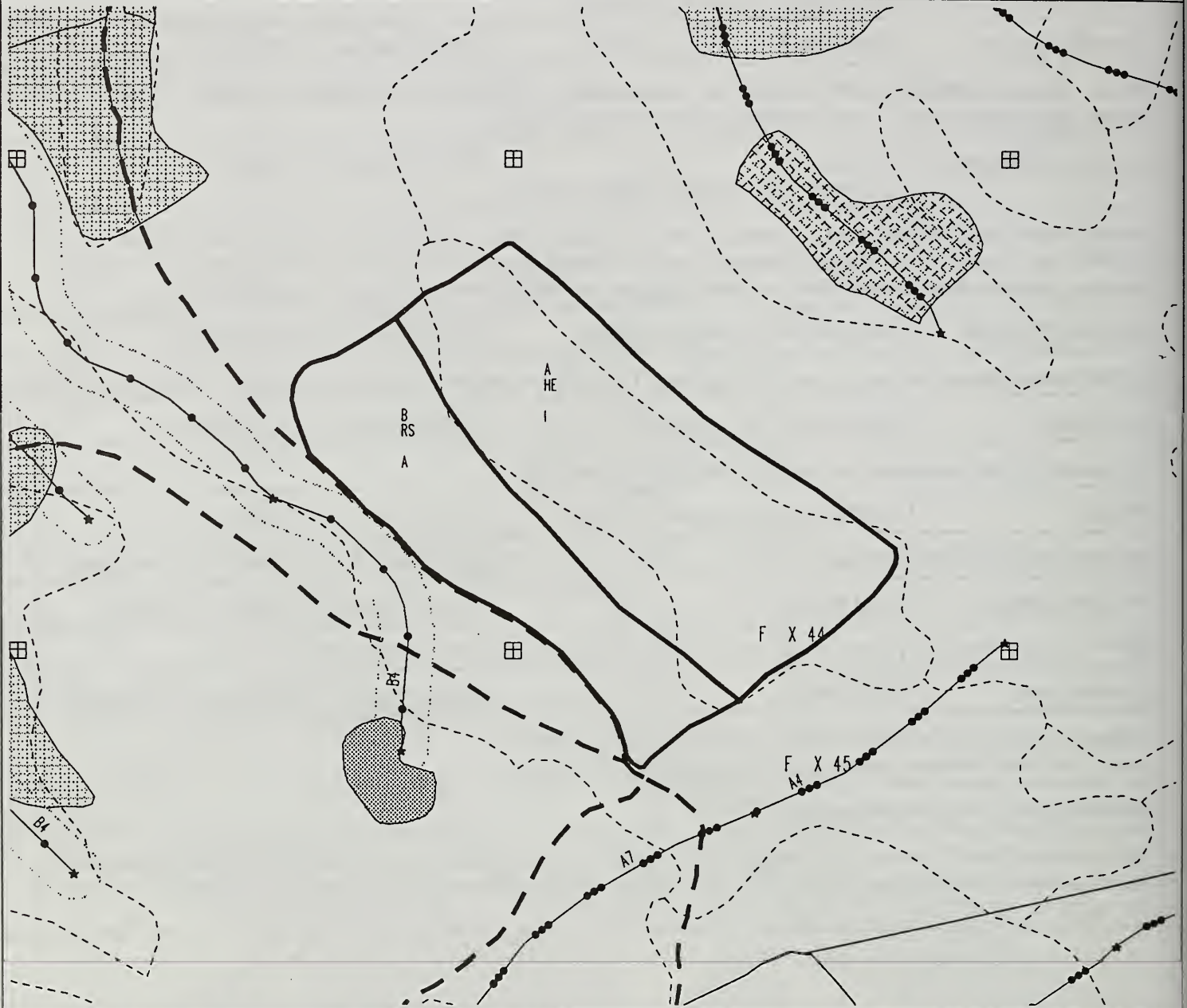
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| VCU #: 575 | UNIT #: 419 | QUARTER QUAD: D3SE | PHOTO YR/#: 1991/1090-116 |
| ACRES: 43.2 | VOL.: 878.7 MBF | LOGGING SYSTEM: Running Skyline | |
| LANDSCAPE ZONE: Unit is within the Honker Watershed. | | | |
| Timber/Vegetation | Field Review: J. Miller, 6/22/93 | Office Review: J. Goering | |
| Species composition predominantly hemlock but includes cedar. Predominantly hemlock regeneration. Windthrow damage evident throughout the unit. Slope instability/failure potential existing. | | | |
| Logging/Transportation | Field Review: J. Estabrook/D. Goude/C. Giles, 6/21/93 | Office Review: M. Whitty | |
| Unit is accessed by Road #70-82-12. Swing yarding is recommended. Fifty percent is uphill logging. Partial cut is not practical due to steep slopes. Partial suspension can be obtained on most of the unit. A quality control visit suggests extending unit boundary downhill (SW) to edge of timber and adding two small spurs. Good economics. | | | |
| Watershed/Fisheries | Field Review: R. Rogers 6/19/93 | Office Review: G. McNaughton | |
| Northern-most stream does not require split yarding. The other two streams (including tributaries) require split yarding. | | | |
| Soil/Geology | Field Review: R. Rogers 6/19/93 | Office Review: G. McNaughton | |
| Recommend partial suspension yarding to protect thin, organic soils. | | | |
| Wildlife | Field Review: G. Green, 6/19/93 | Office Review: C. Confer | |
| Moderate naturally fragmented habitat. Retain Level 1 structure retention. Goshawk survey conducted - no response. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit is not seen from any priority travel routes or use areas. Maximum Modification VQO. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Split yard the Class III streams per fisheries recommendations. Partial suspension recommended. Windthrow hazard limits opportunity for selective harvest. Type A clearcut. Mitigation measures for this unit are as follows: F3, F4, F6, F8, and W5. | | | |

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

VCU : 575

UNIT : 420

QUAD : D3-SE



- Revised Control Lake Project Boundary
- Post-Field Unit Boundary w/ Setting Codes
- Other Post-Field Unit Boundaries
- USFS Timber Types for Volc 4-7
- Eagle Tree Buffer of 330ft
- Existing & Rebuilt Roads
- F.S. Roads Under Construction
- Post-Field Proposed Roads
- Ahmu-Class 1 & Stream Chantypes
- Ahmu-Class 2 & Stream Chantypes
- Ahmu-Class 3 & Stream Chantypes
- Channel Type Change

- Lakes and Ponds
- Second Growth Units
- MMI 4
- McGilvery > 41
- Landings
- Stream & Lake NoCUT Buffers

May 13, 1994

.5 MILE

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

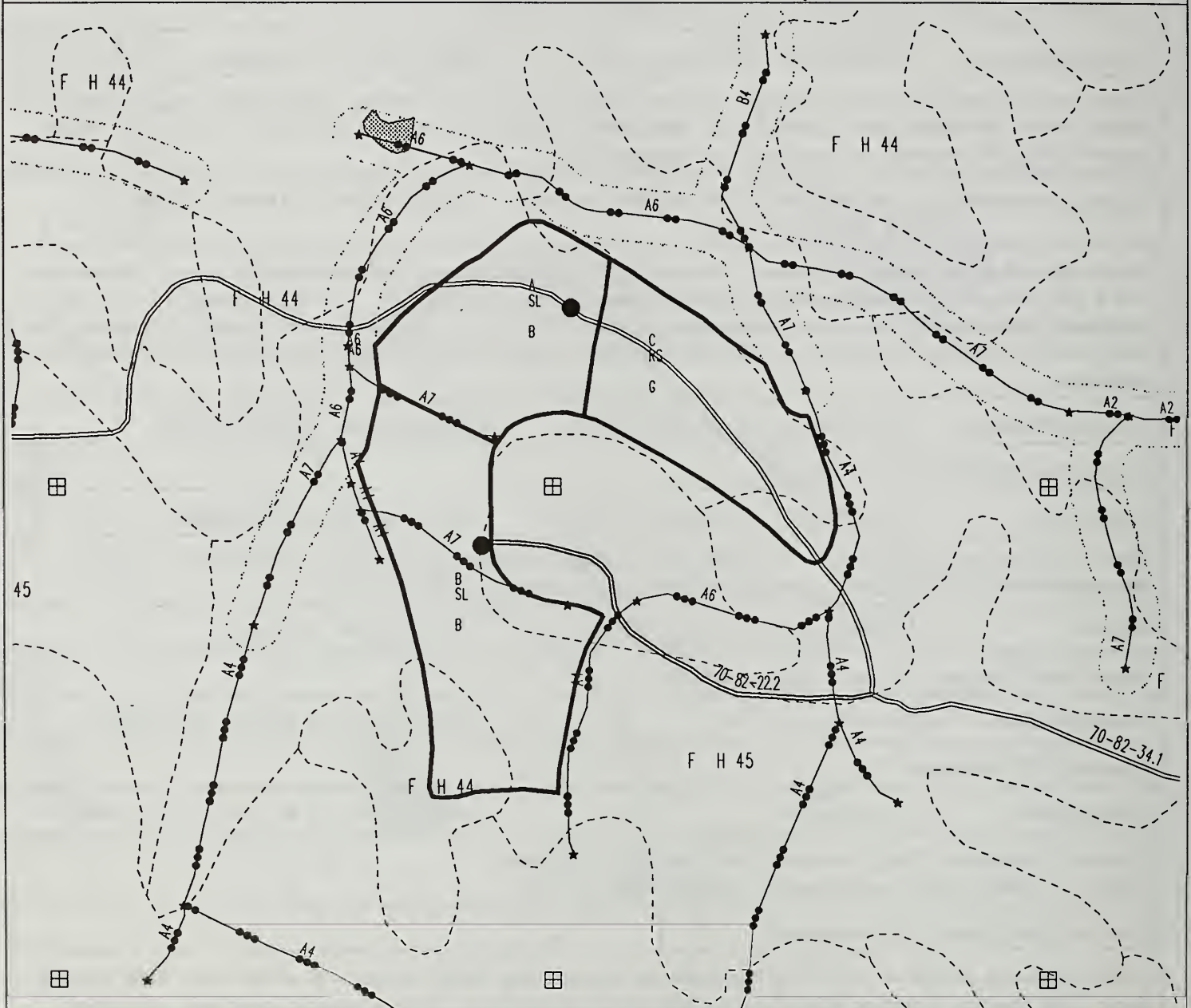
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| VCU #: 575 | UNIT #: 420 | QUARTER QUAD: D3SE | PHOTO YR/#: 1991/1090-116 |
| ACRES: 57.9 | VOL.: 1383.6 MBF | LOGGING SYSTEM: Swingyarder/Running Skyline, Helicopter | |
| LANDSCAPE ZONE: Unit within the Honker Watershed. | | | |
| Timber/Vegetation | Field Review: G. Hedin, 6/22/93 | Office Review: J. Goering | |
| Species composition predominantly hemlock with some spruce. Few cedar are present. Regeneration predominantly hemlock with a few spruce but is lacking cedar. Rock bluffs on the higher elevations of the unit. Steep slope, rocky, relatively thin soils, exposed rock and many wet drainage areas. | | | |
| Logging/Transportation | Field Review: B. Wilkinson/K. Martin/ B. Webster, 6/21/93 | Office Review: J. Doyal/E. Urstadt | |
| Unit is accessed by an existing USFS road. Profiles suggest that partial suspension is not possible above 1200 feet even with a 100 foot tower. Visuals specialists require lowering boundary to 1000 feet. A slackline system will work but recommend analyzing for swing yarder with running skyline during final layout. Run-out for landings is minimal and is a safety hazard. Helicopter yarding above 1000 feet is possible. Leaving unmerch buffer will minimize blowdown. Good economics. | | | |
| Watershed/Fisheries | Field Review: R. Rogers, 6/19/93 | Office Review: G. McNaughton | |
| No perennial streams in unit; no concerns. | | | |
| Soil/Geology | Field Review: R. Rogers, 6/19/93 | Office Review: G. McNaughton | |
| Thin soils on extremely steep slopes - originally required partial suspension to minimize soil disturbance. However, partial suspension below 1,200' with helicopter logging above should minimize slope instability. | | | |
| Wildlife | Field Review: R. Rogers, 6/19/93 | Office Review: M. Hall | |
| Retain Level 1 structure; no major wildlife concerns. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Retention VQO to be met. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Partial suspension possible in lower unit. Conventional logging below 1,000' elevation in unseen area. Helicopter log above 1,000' meeting Retention VQO (Type I single tree/group selection). Type A clearcut lower unit. Mitigation measures for this unit are as follows: V1, V2, W2, and W5. | | | |

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

VCU : 575

UNIT : 421

QUAD : D3-SE



- Revised Control Lake Project Boundary
- Post-Field Unit Boundary w/ Setting Codes
- Other Post-Field Unit Boundaries
- USFS Timber Types for Volc 4-7
- Eagle Tree Buffer of 330ft
- Existing & Rebuilt Roads
- F.S. Roads Under Construction
- Post-Field Proposed Roads
- Ahmu-Class 1 & Stream Chantypes
- Ahmu-Class 2 & Stream Chantypes
- Ahmu-Class 3 & Stream Chantypes
- Channel Type Change

- Lakes and Ponds
- Second Growth Units
- MMI 4
- McGilvery > 41
- Landings
- Stream & Lake NoCUT Buffers

May 13, 1994

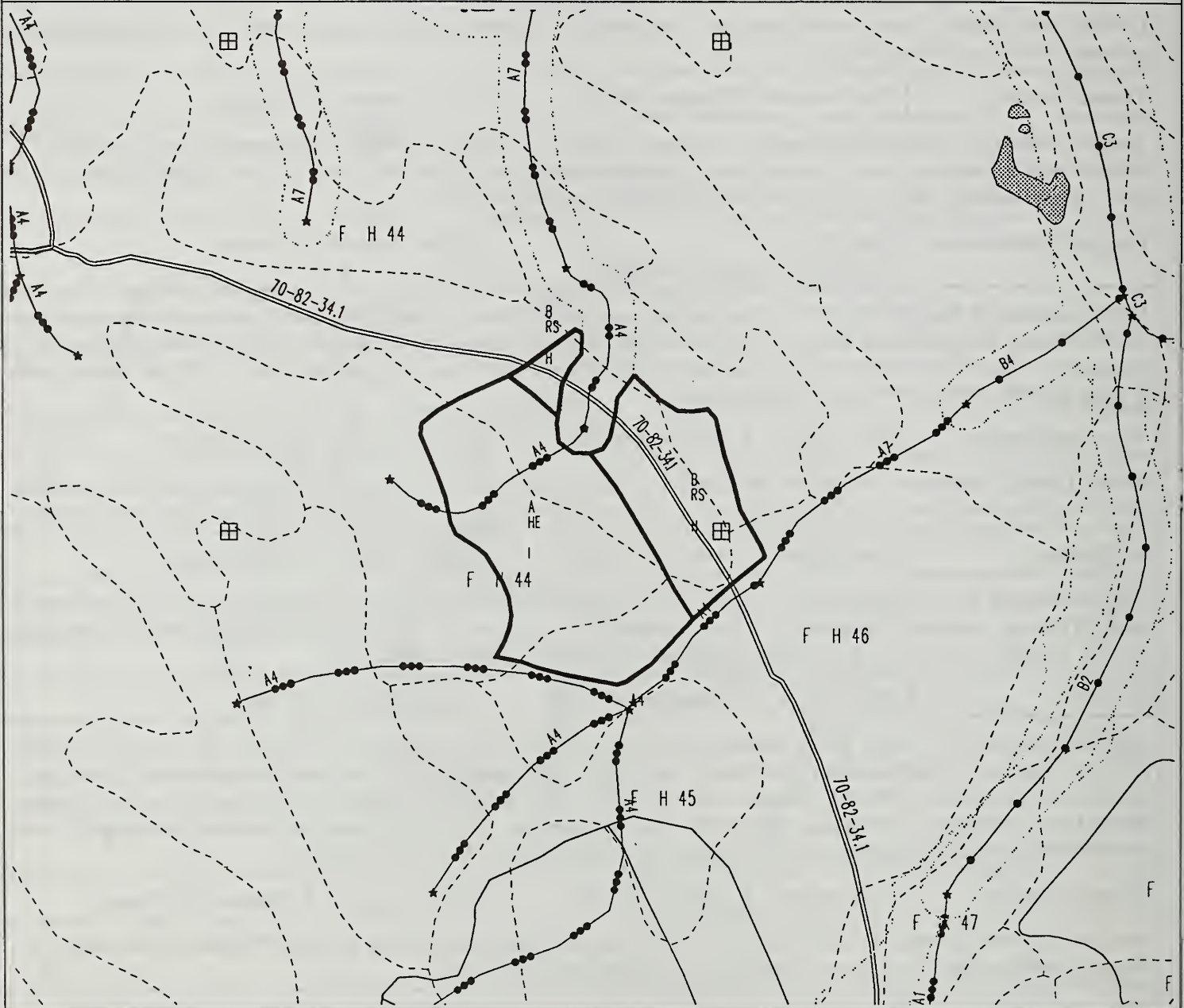
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CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

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| VCU #: 575 | UNIT #: 421 | QUARTER QUAD: D3SE | PHOTO YR/#: 1991/1090-199 |
| ACRES: 45.7 | VOL.: 1907.9 MBF | LOGGING SYSTEM: Swingyard/Running Skyline (East), Slackline 70' Tower (West) | |
| LANDSCAPE ZONE: Unit is within proposed Honker block. Northeast portion of unit is within the second quarter mile adjacent to the scenic river corridor. | | | |
| Timber/Vegetation | Field Review: B. Hasebe, 8/14/93 | Office Review: J. Goering | |
| Species composition predominantly hemlock with some spruce. Few cedar are present. Regeneration predominantly hemlock with a few spruce but is lacking cedar. Dense understory vegetation. Rock bluffs on the higher elevations of the unit. Steep relatively shallow soils, and poor soil drainage areas within unit. | | | |
| Logging/Transportation | Field Review: M. Whitty/E. Dewilde, 8/26/93 | Office Review: K. Jehnke | |
| Unit is accessed by Road #70-82-34.1. This road has some steep adverse pitches. Use swing yarder with running skyline on NE setting. Recommended using a 70 foot tower with slackline system to fully suspend one creek and assure partial suspension. There is one small area of blind lead in the NW portion of unit. Good economics. A 100 foot stream buffer is along portions of the north and NW boundaries. | | | |
| Watershed/Fisheries | Field Review: J. Metzler, 8/11/93 | Office Review: G. McNaughton | |
| Several Class III streams are located in and adjacent to the unit and flow into a Class IIa stream along the north boundary. The Class III's should be used as the unit boundary, or split yarded. The Class IIa stream requires a 100' no cut buffer. | | | |
| Soil/Geology | Field Review: J. Metzler, 8/11/93 | Office Review: G. McNaughton | |
| The area mapped as very high MMI is < 60% (moderate) and shows little evidence of instability, just some pistol butted trees. This area is suitable for harvest and road construction. The south end of the unit is hummocky and wet with slopes of 40% to 60%. The south end has a high MMI and requires at least partial suspension. | | | |
| Wildlife | Field Review: M. Minnillo, 8/11/93 | Office Review: M. Hall | |
| Snag retention Level 1. Snags will be maintained in stream buffer on north side at unit. This is a fairly heavily traveled corridor. Flat area in northwest portion of unit is also highly used wildlife area. Deer sign throughout unit. Bear sign and deer kill on north side of unit. Stream buffer at north unit end helps provide cover in fairly heavily traveled corridor. Retain Level 1 structure. Contiguous old-growth. Avoid disturbance of wintering trumpeter swans by avoiding all human activity within 0.5 mile of known swan wintering areas during october 15 through March 15. | | | |
| Visual/Recreation | Field Review: J. Metzler, 8/11/93 | Office Review: S. Bedross, M. Greenig | |
| Area above 1,000' elevation is visible from Twin Lakes and has been dropped from the unit. The knob in the center of the unit is also visible. Keep below 1,000' due to visibility from Twin Lakes. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| 100' buffer required on Class IIa stream on north boundary. Delete MMI4 from GIS - not unstable. Achieve partial suspension at least in south end of unit. Leave island opportunities in eastern "arm" of unit. Type G shelterwood recommended here. West 2/3 of unit - selective harvest not feasible due to logging system capabilities. Type B clearcut. Split yard Class III streams. Mitigation measures for this unit are as follows: F3, F5, F6, F8, V1, W2, W4, and selective harvest. | | | |

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

QUAD : D3-SE



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|--|---|--|-----------------------------|
| | Revised Control Lake Project Boundary | | Lakes and Ponds |
| | Post-Field Unit Boundary w/ Setting Codes | | Second Growth Units |
| | Other Post-Field Unit Boundaries | | MMI 4 |
| | USFS Timber Types for Volc 4-7 | | McGilvery > 41 |
| | Eagle Tree Buffer of 330ft | | Landings |
| | Existing & Rebuilt Roads | | Stream & Lake NoCUT Buffers |
| | F.S. Roads Under Construction | | |
| | Post-Field Proposed Roads | | |
| | Ahmu-Class 1 & Stream Chantypes | | |
| | Ahmu-Class 2 & Stream Chantypes | | |
| | Ahmu-Class 3 & Stream Chantypes | | |
| | Channel Type Change | | |

.5 MILE

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

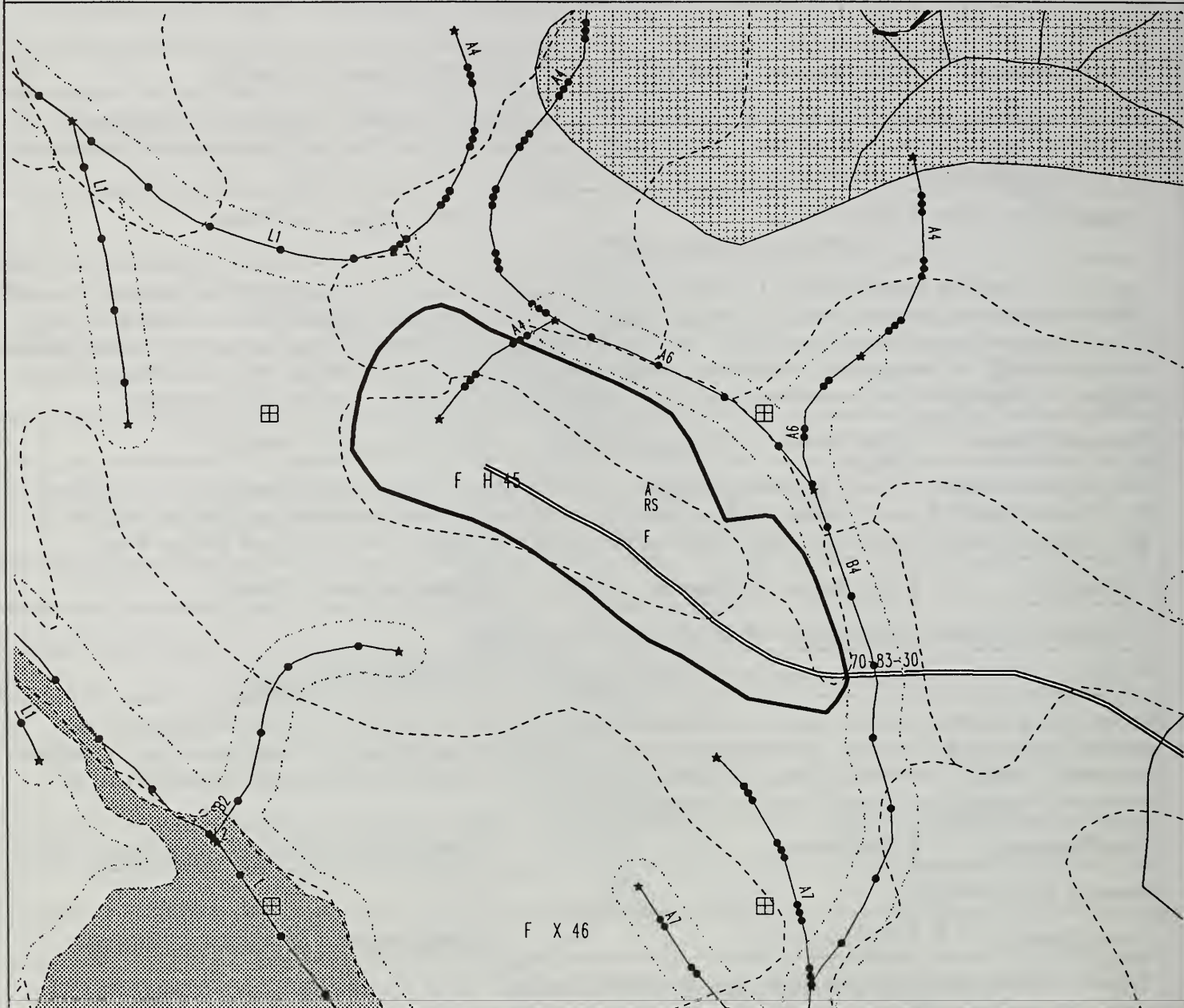
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| VCU #: 575 | UNIT #: 422 | QUARTER QUAD: D3SE | PHOTO YR/#: 1991/1090-199 |
| ACRES: 26.6 | VOL.: 660 MBF | LOGGING SYSTEM: Swingyarder/Running Skyline, Helicopter | |
| LANDSCAPE ZONE: Unit is within proposed Honker Block and the second quarter mile adjacent to the scenic river corridor. | | | |
| Timber/Vegetation | Field Review: G. Hedin, 8/11/93 | Office Review: J. Goering | |
| Species composition predominantly hemlock with some cedar. Few spruce are present. Regeneration predominantly hemlock but includes a few cedar and spruce. Rock bluffs in the center portion of the unit. Steep relatively shallow soils, and poor soil drainage areas within unit. | | | |
| Logging/Transportation | Field Review: B. Wilkinson/J. Graves, 8/23/93 | Office Review: M. Whitty | |
| The unit is accessed by Road #70-82-34.1. This road is located in the field at approximately 600 foot elevation. The IDT determined that above 540 feet elevation is a visual concern. During final layout, attempt to place road below 540 feet while allowing for connection to Unit 575-421. Note that engineers had difficulties locating the road in its present location due to rock bluffs. A swing yarder with running skyline should be able to harvest below the 540 foot elevation. Above 540 feet, helicopter partial cut to meet retention VQO. Logging system is not field verified. Fair economics. | | | |
| Watershed/Fisheries | Field Review: S. Tanguay, 7/14/93 | Office Review: T. Stewart | |
| Two streams to consider: First is the southern boundary- fish observed in stream originally mapped as B2 - changed to B4. This is a Class I, II and III stream along the unit; 100' no cut on the lower portions flagged B/W (not adjacent to unit). Split yard on the top portions of this, as well as the other stream flagged O/W in the north portion of unit. | | | |
| Soil/Geology | Field Review: S. Tanguay, 7/14/93 | Office Review: T. Stewart | |
| No concerns - moderate to high slopes, well drained to the bottom muskeg. | | | |
| Wildlife | Field Review: S. Tanguay, 7/14/93 | Office Review: M. Hall | |
| Retain Level 1 structure. Directional fall away from muskeg in southeast end of unit. Surveyed for goshawks - no response. Surveyed for murrelets - presence documented. Thorne River approximately 1/4 mile east of unit. Contiguous area with VC 6 and 7. Avoid disturbance of wintering trumpeters by avoiding all human activity within 0.5 mile of known swan wintering areas during October 15 through March 15. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig, 7/30/93 | |
| Retention VQO to be met. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Directional fall and yard away from Class III stream along southern boundary and within unit on north. Class I portion of stream not near unit. Class II section of stream in north part of unit requires 100' buffer (expanded width prescriptive buffer identified after field season, not flagged in field). Unit and road designed in field at elevation higher than 540'. Road will need to be lowered to meet retention. Selective harvest with cable logging (Type H shelterwood) feasible on lower unit. Helicopter log, selective harvest (Type I group selection) meeting Retention VQO on upper unit. Mitigation measures for this unit are as follows: F4, F6, F8, V1, and W2. | | | |

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

VCU : 575

UNIT : 423

QUAD : D3-SE



- Revised Control Lake Project Boundary
- Post-Field Unit Boundary w/ Setting Codes
- Other Post-Field Unit Boundaries
- USFS Timber Types for Volc 4-7
- Eagle Tree Buffer of 330ft
- Existing & Rebuilt Roads
- F.S. Roads Under Construction
- Post-Field Proposed Roads
- Ahmu-Class 1 & Stream Chantypes
- Ahmu-Class 2 & Stream Chantypes
- Ahmu-Class 3 & Stream Chantypes
- Channel Type Change

- Lakes and Ponds
- Second Growth Units
- MMI 4
- McGilvery > 41

- Landings
- Stream & Lake NoCUT Buffers

May 13, 1994

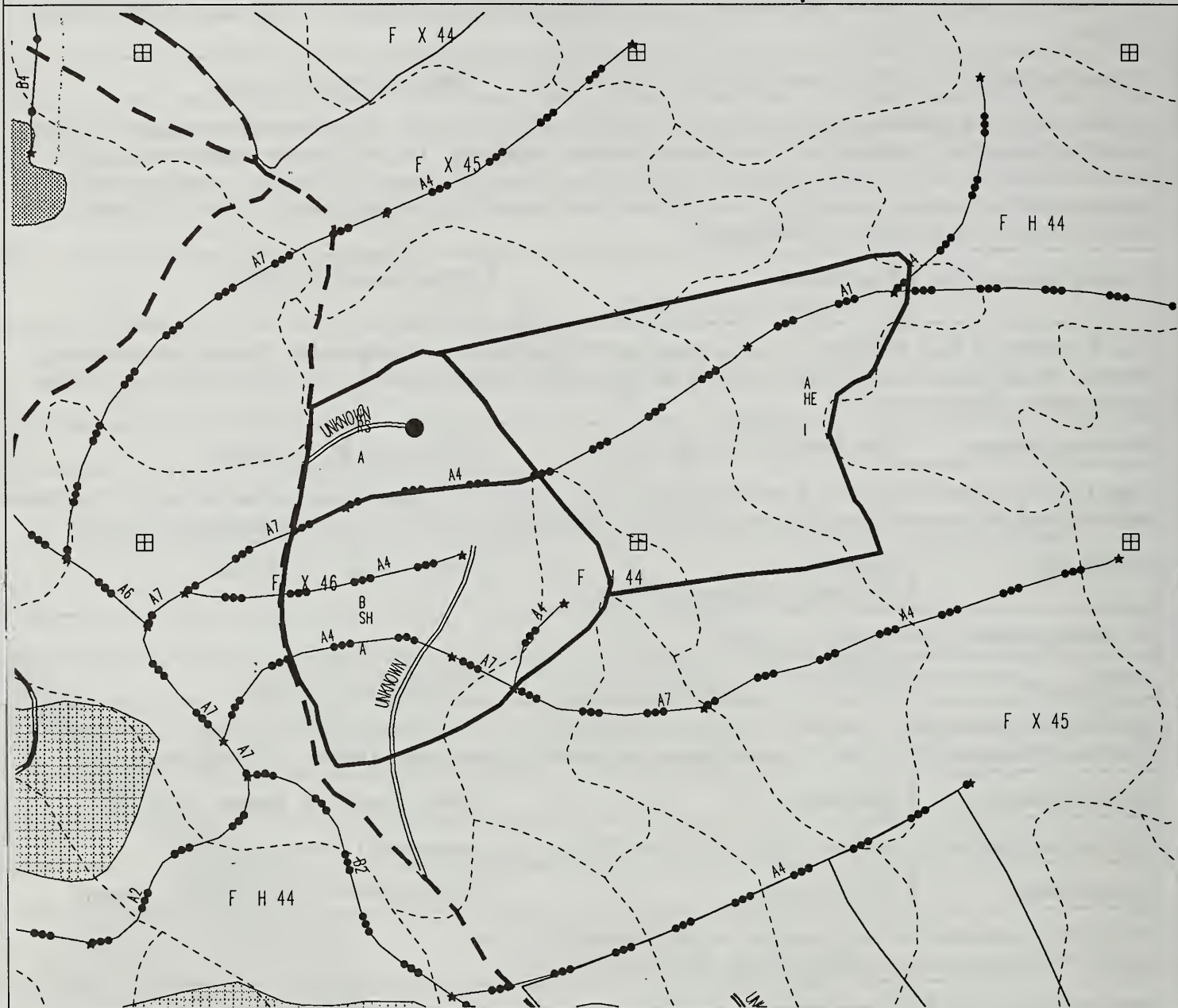
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









CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD







| | | | |
|---|--|---|---------------------------|
| VCU #: 575 | UNIT #: 423 | QUARTER QUAD: D3SE | PHOTO YR/#: 1991/1090-118 |
| ACRES: 35.2 | VOL.: 686.3 MBF | LOGGING SYSTEM: Swingyarder/Running Skyline | |
| LANDSCAPE ZONE: Unit is within proposed Honker Block and the second quarter mile adjacent to the scenic river corridor. | | | |
| Timber/Vegetation | Field Review: J. Miller, 8/12/93 | Office Review: J. Goering | |
| Species composition predominantly hemlock but includes cedar and some spruce. Regeneration predominantly hemlock with a few spruce but is lacking cedar. Fairly dense understory vegetation. Low to moderate amounts of mistletoe infection evident in canopy. Poor regeneration in the southeast portion due to poor soil drainage. Consider partial retention/seedtree harvest to promote regenerative success and desirable species composition. Harvest all mistletoe infected hemlock and cut infected regeneration. | | | |
| Logging/Transportation | Field Review: T. Wetzel/D. Foster, 8/13/93 | Office Review: M. Whitty | |
| Unit is accessed by Road #70-83-30. A swing yarder with running skyline is recommended. Seventy percent is uphill logging. Partial suspension is possible in 80% of the unit. Partial cutting is possible. The east boundary is a 100 foot stream buffer. Good economics. | | | |
| Watershed/Fisheries | Field Review: H. Sloan, 7/21/93 | Office Review: T. Stewart | |
| Class I stream that runs along north to southeast border of unit requires a 100' no commercial harvest buffer. High beaver use with ponds and channels throughout unit. Small Class III stream in west of unit does not require split yarding. | | | |
| Soil/Geology | Field Review: H. Sloan/A. Sullivan, 7/21/93 | Office Review: T. Stewart | |
| No stability concerns. Moderate to low slopes. | | | |
| Wildlife | Field Review: A. Sullivan, 7/21/93 | Office Review: M. Hall | |
| No concerns. Retain Level 1 structure. Contiguous old-growth tract. Avoid disturbance of wintering trumpeter swans by avoiding all human activity within 0.5 mile of known swan wintering areas during October 15 through March 15. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit not seen from any priority travel route or use area. Thorne Lake approximate 1/4 mile south of unit. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| V1Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Seed tree harvest (Type F). 100' buffer plus 50' selective harvest along Class I stream to east. Blind lead in east part of unit should be left for a leave island. Visual concerns mitigated in field layout. Mitigation measures for this unit are as follows: F5, F8, F10, V1, W1, and W2. | | | |

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

QUAD : D3-SE



-  Revised Control Lake Project Boundary
-  Post-Field Unit Boundary w/ Setting Codes
-  Other Post-Field Unit Boundaries
-  USFS Timber Types for Volc 4-7
-  Eagle Tree Buffer of 330ft
-  Existing & Rebuilt Roads
-  F.S. Roads Under Construction
-  Post-Field Proposed Roads
-  Ahmu-Class 1 & Stream Chantypes
-  Ahmu-Class 2 & Stream Chantypes
-  Ahmu-Class 3 & Stream Chantypes
-  Channel Type Change

-  Lakes and Ponds
 Second Growth Units
 MMI 4
 McGilvery > 41
 Landings
 Stream & Lake NoCUT Buffers

.5 MILE

August 03, 1994

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

| | | | |
|---|--|---|---------------------------|
| VCU #: 575 | UNIT #: 424 | QUARTER QUAD: D3SE | PHOTO YR/#: 1991/1090-116 |
| ACRES: 70.7 | VOL.: 1863 MBF | LOGGING SYSTEM: Swingyarder/Running Skyline, Shovel | |
| LANDSCAPE ZONE: Unit is within Honker Watershed. | | | |
| Timber/Vegetation | Field Review: T. Stecher, 6/22/93 | Office Review: J. Goering | |
| Species composition includes hemlock, spruce, and cedar. Regeneration predominantly hemlock but includes cedar and spruce. | | | |
| Logging/Transportation | Field Review: J. Spolar/ M. Whitty/J. Graves, 6/21/93 | Office Review: M. Whitty | |
| This unit was accessed by Road #70-82-13 during field layout. An IDT decision determined that this road could be eliminated (see Unit 575-425) and that this unit could best be accessed from an existing USFS road. Verify road location during final layout. The harvest system is a swing yarder with running skyline. Shovel logging may be possible in the SW portion. The NW boundary has a potential blowdown problem. Fair to good economics. | | | |
| Watershed/Fisheries | Field Review: J. Knutzen, 6/18/93 | Office Review: G. McNaughton | |
| Four streams in unit all require split yarding. Selective cut in 100' V-notch area of stream 3 starting near southwest corner to Southwest edge. | | | |
| Soil/Geology | Field Review: J. Knutzen, 6/18/93 | Office Review: G. McNaughton | |
| No concerns. Moderate slopes with good stability | | | |
| Wildlife | Field Review: H. Sloan, 6/18/93 | Office Review: M. Hall | |
| No concerns. Level 1 structure retention. Goshawk survey conducted - no detections. Audible woodpecker detection. Contiguous old-growth tract. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Not seen from Honker Canoe Route. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Road as laid out in field (82-70-13) can be eliminated for this unit and Unit 575-425. Shovel log off existing road on south and west part of unit. Spur off main road to swing yard upper part. Type A clearcut. Mitigation measures for this unit are as follows: F6, F8, W2, and W5. | | | |

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

VCU : 575

UNIT : 425

QUAD : D3-SE



- | | | | |
|--|---|--|-----------------------------|
| | Revised Control Lake Project Boundary | | Lakes and Ponds |
| | Post-Field Unit Boundary w/ Setting Codes | | Second Growth Units |
| | Other Post-Field Unit Boundaries | | MMI 4 |
| | USFS Timber Types for Volc 4-7 | | McGilvery > 41 |
| | Eagle Tree Buffer of 330ft | | Landings |
| | Existing & Rebuilt Roads | | Stream & Lake NoCUT Buffers |
| | F.S. Roads Under Construction | | |
| | Post-Field Proposed Roads | | |
| | Ahmu-Class 1 & Stream Chantypes | | |
| | Ahmu-Class 2 & Stream Chantypes | | |
| | Ahmu-Class 3 & Stream Chantypes | | |
| | Channel Type Change | | |

May 13, 1994

.5 MILE

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

| | | | |
|--|-----------------------------------|---|---------------------------|
| VCU #: 575 | UNIT #: 425 | QUARTER QUAD: D3-SE | PHOTO YR/#: 1991/1090-116 |
| ACRES: 47.3 | VOL.: 1967.2 MBF | LOGGING SYSTEM: Swingyarder/Running Skyline, Helicopter | |
| LANDSCAPE ZONE: Unit is within the Honker Watershed. | | | |
| Timber/Vegetation | Field Review: T. Stecher, 6/26/93 | Office Review: J. Goering | |
| Species composition includes hemlock, spruce, and cedar. Regeneration predominantly hemlock with a few spruce but is lacking cedar. Windthrow damage evident throughout the unit. Slight slope instability/failure potential existing. Steep relatively shallow soils, and poor soil drainage areas. Good advanced regeneration (candidate for release) consisting of hemlock. | | | |
| Logging/Transportation | Field Review: M. Whitty/J. Graves | Office Review: E. Urstadt | |
| This unit was laid out in the beginning of the project and before visual constraints were obtained by the engineers. Later, the IDT determined that this unit is in a visual concern area. Field engineers suggested that this unit should be extended down to the SW. As the area to the SW is not in a visual concern area, the IDT decided to extend the unit to the SW. The IDT recommends a helicopter partial cut to maintain retention VQO in the remaining visual concern area. The unit can now be accessed from an existing USFS road. Now road #70-82-13 (which is flagged to the unit) can be eliminated. A swing yarder with running skyline should be able to harvest the unit. Verify roads and logging system during final layout. Good economics. See Unit 575-424. | | | |
| Watershed/Fisheries | Field Review: J. Knutzen, 6/18/93 | Office Review: G. McNaughton | |
| Selectively cut V-notch area of stream along north unit boundary to minimize soil disturbance. | | | |
| Soil/Geology | Field Review: J. Knutzen, 6/18/93 | Office Review: G. McNaughton | |
| Partially suspend to minimize soil disturbance. Soils highly saturated, signs of fallen trees. | | | |
| Wildlife | Field Review: J. Knutzen, 6/18/93 | Office Review: M. Hall | |
| No concerns. Level 1 structure retention. Goshawk survey conducted - no detections. Wetlands below unit to the southwest had Canada goose scat. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit not seen from any priority travel route or use area. Keep below 1,100' due to visibility from Twin and Thorne Lakes. Retention VQO above 1,100'. Maximum Modification below 1,100'. Retention VQO to be met. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Unit redesigned to take timber to southwest of original layout. This design will avoid seen area completely. Consider accessing this unit by spurring from existing road to southwest. This lower portion not laid out in field. Partial suspension recommended. Type B clearcut (setting B) recommended if observations above road are applicable to extension of unit. Split yard Class III stream. Helicopter log above 1,000' elevation meeting retention VQO (Type I single tree/group selection). Mitigation measures for this unit are as follows: F6, F8, V1, V2, W2, and W4. | | | |

NO UNIT MAP

UNIT DROPPED OR DEFERRED

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

| | | | |
|---|--|--|---------------------------|
| VCU #: 575 | UNIT #: 426 | QUARTER QUAD: D3SE | PHOTO YR/#: 1991/1090-117 |
| ACRES: | VOL.: | LOGGING SYSTEM: | |
| LANDSCAPE ZONE: Unit is within the Honker Watershed. | | | |
| Timber/Vegetation | Field Review: S. Karstens | Office Review: J. Goering | |
| Species composition includes hemlock, spruce, and a few cedar. Regeneration predominantly hemlock with a few spruce but is lacking cedar. Poor regeneration except on nurse logs. Windthrow damage evident throughout the unit. Steep, rocky, shallow soils, and poor soil drainage areas. Salmonberry present. Erosive potential due to steep slopes and soil water movement. | | | |
| Logging/Transportation | Field Review: M. Whitty/J. Graves/E. Dewilde, 6/29/93 | Office Review: J. Doyal/M. Whitty | |
| In order to assure partial suspension, a 70' tower with a slackline system will be required due to safety concerns caused by limited runout and tailholds in shallow, wet soil. A highlead configuration should be used here. Swingyarding is 100% downhill with a maximum yarding distance of \pm 560 (This is the safer alternative). Tall trees rigged at 20' are required for partial suspension but are generally not available - Partial suspension will not be possible. Recommend "lifting" partial suspension requirement due to the following: No streams in the vicinity; water transport occurs as subsurface flow which has low sediment transport potential; debris flows or instabilities aggravated by ground lead will be minimal due to shallow nature of soil; uphill boundary borders bluffs; unit can then be swingyarded in a highlead configuration. | | | |
| Watershed/Fisheries | Field Review: J. Knutzen, 6/18/93 | Office Review: G. McNaughton | |
| No streams in unit. No concerns. | | | |
| Soil/Geology | Field Review: J. Knutzen, 6/18/93 | Office Review: G. McNaughton | |
| Steep, wet slopes suggest soil instability. Recommend partial suspension. | | | |
| Wildlife | Field Review: J. Knutzen, 6/18/93 | Office Review: M. Hall | |
| No concerns. Level 1 structure retention. Goshawk survey conducted - no detections. Wolf kill bones observed. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig, T. Stewart | |
| Unit not seen from any priority travel route or use area. Keep below 1100' due to visibility from Twin Lake. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Unit deferred. The logical unit if accessed from existing road would be adjacent to an existing unit. Road to this unit unnecessary because adjacent units can be accessed from existing road. This unit requires partial suspension, not achievable with this road configuration. Should be expanded to southwest when greenup met (575-102). Also, unit and road as laid out is unsafe logging system - inadequate runout to road. | | | |

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

VCU : 575

UNIT : 428

QUAD : D3-SE



- Revised Control Lake Project Boundary
- Post-Field Unit Boundary w/ Setting Codes
- Other Post-Field Unit Boundaries
- USFS Timber Types for Volc 4-7
- Eagle Tree Buffer of 330ft
- Existing & Rebuilt Roads
- F.S. Roads Under Construction
- Post-Field Proposed Roads
- Ahmu-Class 1 & Stream Chantypes
- Ahmu-Class 2 & Stream Chantypes
- Ahmu-Class 3 & Stream Chantypes
- Channel Type Change

- Lakes and Ponds
- Second Growth Units
- MMI 4
- McGilvery > 41
- Landings
- Stream & Lake NoCUT Buffers

May 13, 1994

.5 MILE

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

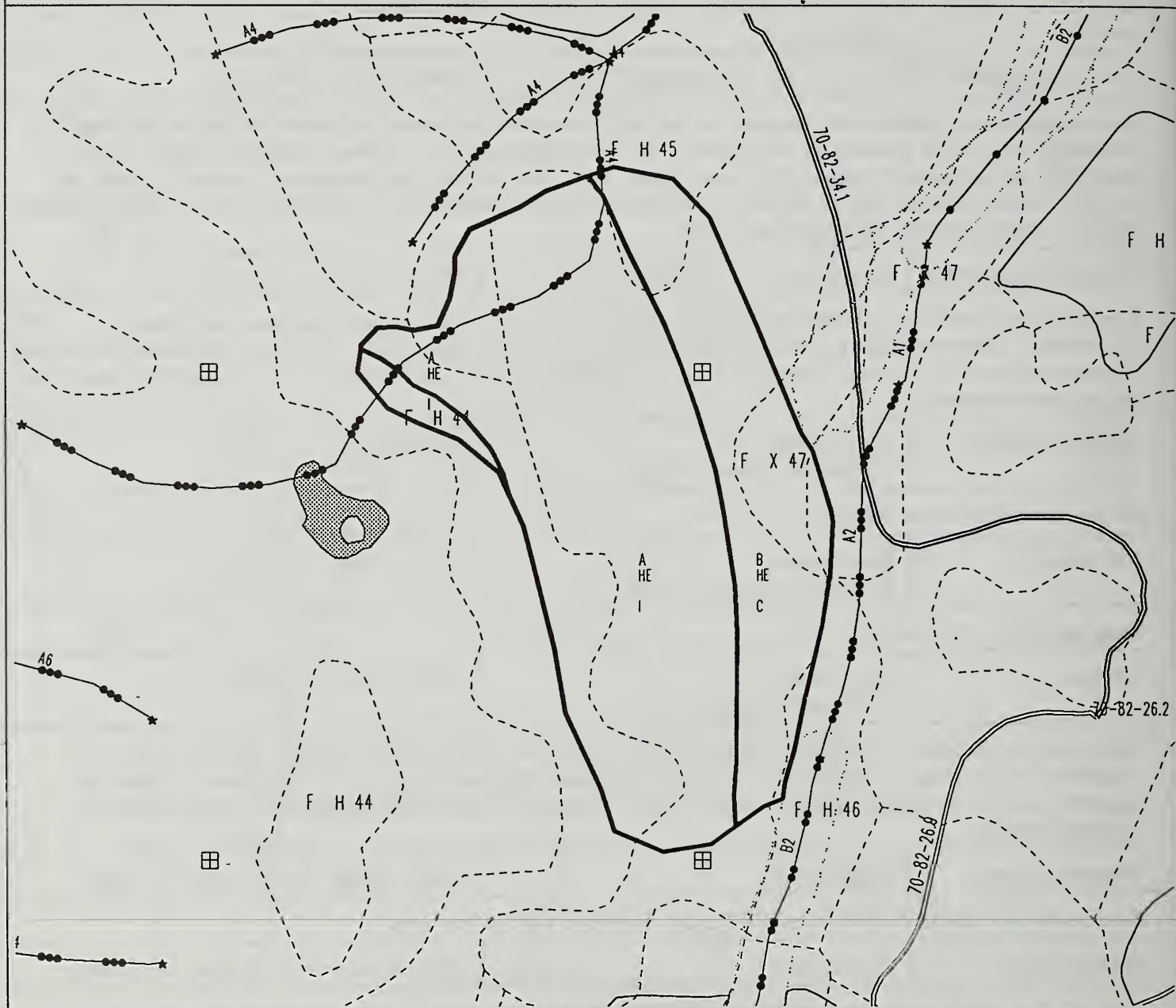
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|--|---|---|---------------------------|
| VCU #: 575 | UNIT #: 428 | QUARTER QUAD: D3SE | PHOTO YR/#: 1991/1090-199 |
| ACRES: 16.8 | VOL.: 450.9 MBF | LOGGING SYSTEM: Helicopter | |
| LANDSCAPE ZONE: Unit is within proposed Honker block and within the second 1/4 mile adjacent to the scenic river corridor. | | | |
| Timber/Vegetation | Field Review: S. Karstens, 7/31/93 | Office Review: J. Goering | |
| Species composition predominantly hemlock but includes some spruce and cedar. Regeneration predominantly hemlock with some spruce but is generally lacking cedar. Low to moderate amounts of mistletoe infection evident in canopy. Rock bluffs on the higher elevations of the unit. Steep, rocky, and shallow soils. Salmonberry present. Harvest all mistletoe infected hemlock and cut infected regeneration. Possible salmonberry and brush incursions with soil disturbance based on existing densities, although presently low. | | | |
| Logging/Transportation | Field Review: B. Wilkinson/J. Graves | Office Review: E. Urstadt | |
| A practical road could not be located for this unit. Steep adverse grades and continuous adverse grades were encountered. Helicopter logging to Rd #70-83-30 (in Unit 574-423) is recommended. AYD is approximately 5,000' and flightslope equals 0%. Unit was effected by visuals. This unit is visible from Honker Divide. A helicopter partial cut is the best harvest method. | | | |
| Watershed/Fisheries | Field Review: H. Sloan/D. Crowe, 7/23/93 | Office Review: T. Stewart | |
| No steams within unit; no concerns. | | | |
| Soils/Geology | Field Review: H. Sloan/D. Crowe, 7/23/93 | Office Review: T. Stewart | |
| Moderate slopes. No concerns. | | | |
| Wildlife | Field Review: H. Sloan/D. Crowe, 7/23/93 | Office Review: M. Hall | |
| Retain structure in center of unit where the rock slide is located, for wildlife (raptor) habitat. Goshawk survey conducted - no detections. Retain Level 1 structure; contiguous old-growth tract. Avoid disturbance of wintering trumpeter swans by avoiding all human activity within 0.5 mile of known swan wintering areas during October 15 through March 15. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Keep below 620' due to visibility from Twin Lake. Retention VQO in seen area. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Helicopter partial cut recommended. Type G shelterwood cut leaving spruce and cedar with option of planting spruce in openings to create mixed stand. Also cut misletoe-infected reproduction. Slight uphill yarding to Unit 575-422; otherwise, only yarding opportunity is directly across Thorne River and on north end of Thorne Lake to Unit 575-423. Selective harvest. Mitigation measures include F5, V2 and W2. | | | |



















CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

VCU : 575

UNIT : 429

QUAD : D3-SE



- | | | | |
|---|---|---|-----------------------------|
|  | Revised Control Lake Project Boundary |  | Lakes and Ponds |
|  | Post-Field Unit Boundary w/ Setting Codes |  | Second Growth Units |
|  | Other Post-Field Unit Boundaries |  | MMI 4 |
|  | USFS Timber Types for Volc 4-7 |  | McGilvery > 41 |
|  | Eagle Tree Buffer of 330ft |  | Landings |
|  | Existing & Rebuilt Roads |  | Stream & Lake NoCUT Buffers |
|  | F.S. Roads Under Construction | | |
|  | Post-Field Proposed Roads | | |
|  | Ahmu-Class 1 & Stream Chantypes | | |
|  | Ahmu-Class 2 & Stream Chantypes | | |
|  | Ahmu-Class 3 & Stream Chantypes | | |
|  | Channel Type Change | | |

May 13, 1994

.5 MILE

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

| | | | |
|--|---|---|---------------------------|
| VCU #: 575 | UNIT #: 429 | QUARTER QUAD: D3SE | PHOTO YR/#: 1991/1090-199 |
| ACRES: 70.6 | VOL.: 2406.5 MBF | LOGGING SYSTEM: Helicopter | |
| LANDSCAPE ZONE: Unit is within proposed medium Honker block and is just outside the second quarter mile of the Thorne River corridor. | | | |
| Timber/Vegetation | Field Review: S. Karstens, 8/22/93 | Office Review: J. Goering | |
| Species composition predominantly hemlock but includes some spruce and cedar. Regeneration predominantly hemlock with a few spruce but is generally lacking cedar. Low to moderate amounts of mistletoe infection evident in canopy. Rock bluffs on the higher elevations of the unit. Steep relatively shallow soils, and poor soil drainage areas within unit. Salmonberry present. Harvest all mistletoe infected hemlock and cut infected regeneration. | | | |
| Logging/Transportation | Field Review: | Office Review: | |
| Engineers did not visit this unit as it was designated for helicopter yarding. | | | |
| Watershed/Fisheries | Field Review: G. Jackson/D. Crowe | Office Review: T. Stewart | |
| Class III streams on northwest and southeast sides. On the southeast side, harvest only to the break on slope above the stream. Split yard away from the stream on the northwest side. | | | |
| Soil/Geology | Field Review: G. Jackson/D. Crowe, 7/16/93 | Office Review: T. Stewart | |
| The unit is generally very steep with numerous seeps and cliffs. If cable logged, exclude area with high mass movement potential that runs through upper central part of unit. See copy of overlay. McGilvery soils in 30% of unit. | | | |
| Wildlife | Field Review: G. Jackson/D. Crowe, 7/16/93 | Office Review: M. Hall | |
| Heavy deer trails running south to north in eastern half of unit below high mass movement areas. Wetlands along west boundary of unit. Retain Level 1 structure. Contiguous old-growth tract. | | | |
| Visual/Recreation | Field Review: G. Jackson/D. Crowe, 7/16/93 | Office Review: S. Bedross, M. Greenig | |
| Unit not seen from any priority travel route or use area. Unit does not meet VQO - is in a scenic viewshed and is high VAC. Above > 920' under partial Retention VQO - should be 5 to 10 acres in size under retention and should be single tree or group selection (less than 2 acres). | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Helicopter yarding provides full suspension. Directional fall and split yard Class III streams. On southeast side harvest only to break in slope of Class III stream. Helicopter log retention areas around cliffs with high mass movement potential and McGilvery soils. Small group selection (Type I group selection) in these areas. Type I single tree cut to meet Retention VQO above 920'. Type C below 920'. Mitigation measures for this unit are as follows: F1, F6, F7, V2, W2, and W3. | | | |

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

VCU : 575

UNIT : 430

QUAD : D3-SE



- Revised Control Lake Project Boundary
- Post-Field Unit Boundary w/ Setting Codes
- Other Past-Field Unit Boundaries
- USFS Timber Types for Volc 4-7
- Eagle Tree Buffer of 330ft
- Existing & Rebuilt Roads
- F.S. Roads Under Construction
- Past-Field Proposed Roads
- Ahmu-Class 1 & Stream Chantypes
- Ahmu-Class 2 & Stream Chantypes
- Ahmu-Class 3 & Stream Chantypes
- Channel Type Change

- Lakes and Ponds
- Second Growth Units
- MMI 4
- McGilvery > 41
- Landings
- Stream & Lake NoCUT Buffers

May 13, 1994

.5 MILE

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

| | | | |
|--|--|---|---------------------------|
| VCU #: 575 | UNIT #: 430 | QUARTER QUAD: D3SE | PHOTO YR/#: 1991/1090-197 |
| ACRES: 16.6 | VOL.: 357.3 MBF | LOGGING SYSTEM: Slackline System | |
| LANDSCAPE ZONE: Unit is within Honker Block. | | | |
| Timber/Vegetation | Field Review: J. Miller, 7/27/93 | Office Review: J. Goering | |
| Species composition predominantly hemlock with some spruce. Few cedar are present. Regeneration predominantly hemlock but includes some spruce. Fairly poor regeneration in the southern portion. Large V-notched streams intersecting unit. Windthrow damage present in eastern portion of unit. Muskeg inclusions within the unit. Slope instability/failure potential existing due to soil/water movement. Small slides exist throughout the unit. Steep slopes, rocky, and shallow soils. Many small seeps, streams, and poor soil drainage areas. | | | |
| Logging/Transportation | Field Review: T. Hoshall/J. Herzberg/ E. Urstadt/K. Jehnke, 9/03/93 | Office Review: K. Jehnke, 9/04/93 | |
| Rd #70-82-26.9 crosses muskeg approximately 200'. Helicopter logging recommended in resource report; however excellent deflection with probably full suspension possible from the central landing to the majority of the unit. Unit laid out below 1,200' elevation. 100% downhill yarding. MYD equals 500' tailholds on the upper slopes above unit to get suspension. Unstable rocky slopes in southwest portions of unit left as inclusion (approximately 1 acre). | | | |
| Watershed/Fisheries | Field Review: G. Jackson/D. Crowe, 7/16/93 | Office Review: T. Stewart | |
| Two streams affect unit design - one flows along the northwest boundary steep banks in eroding till require that the boundary be placed no closer than the break in slope at the top of the banks. The stream turns into a Class IIB stream, which flows into a Class III stream, so it only needs a 25' selective harvest buffer. The other stream is an A1, and harvest only to slope break is required. | | | |
| Soil/Geology | Field Review: G. Jackson/D. Crowe, 7/16/93 | Office Review: T. Stewart | |
| This is a very steep unit with patches of McGilvery soil and recent small slides and rock-falls. Numerous cliffs between 5' and 25' high are present throughout the unit. Seeps are present along low slopes in the western one third of the unit. Due the extreme slopes and excessive moisture, helicopter logging is recommended. | | | |
| Wildlife | Field Review: G. Jackson/D. Crowe, 7/16/93 | Office Review: M. Hall | |
| Heavy deer use especially along stream and muskegs at Northwest boundary of unit - keep boundary on east side of muskegs to avoid high quality deer habitat. Retain Level 1 structure. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit not seen from any priority travel route or use area. Not seen from Honker Canoe Route. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Boundary change at southeast side. Unit redesigned below 1,200' elevation and below steep, unstable areas. The two Class IIB streams require 100' buffers (expanded width prescriptive buffers not flagged in field). Full suspension will minimize soil disturbance so helicopter logging not required. Island of trees left between the Class IIB streams. Type C and B clearcut. Mitigation measures for this unit are: F3, F5, F7, F8, V1, and W3. | | | |

This unit is combined with unit 575-433.

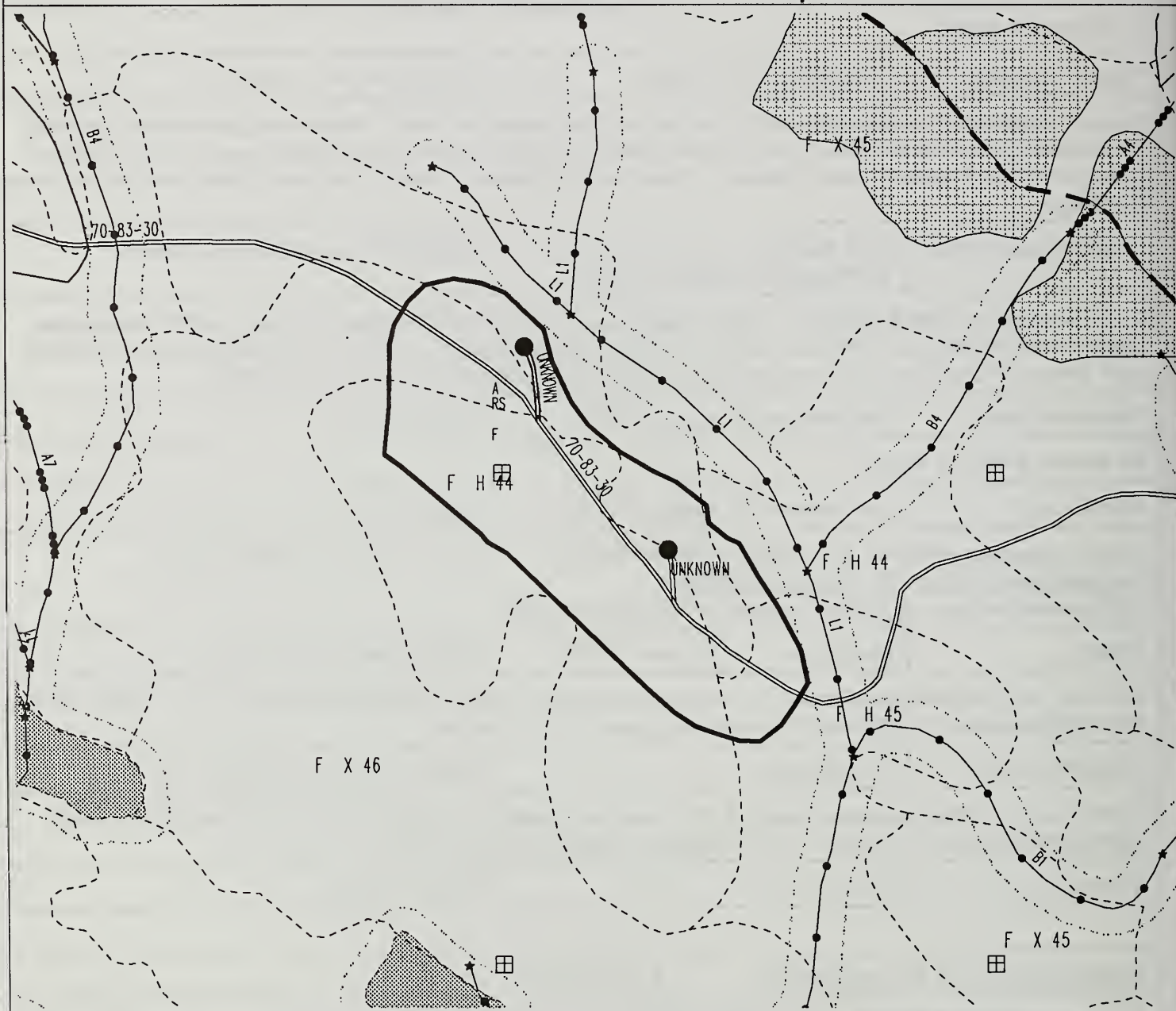
CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD













| | | | |
|---|--|------------------------------------|---------------------------|
| VCU #: 575 | UNIT #: 431 | QUARTER QUAD: D3SE | PHOTO YR/#: 1991/1090-198 |
| ACRES: | VOL.: | LOGGING SYSTEM: Helicopter | |
| LANDSCAPE ZONE: | | | |
| Timber/Vegetation | Field Review: T. Stecher | Office Review: J. Goering | |
| Species composition predominantly hemlock but includes some spruce and cedar. Regeneration predominantly hemlock but includes a few cedar and spruce. Rock bluffs on the higher elevations of the unit. Steep slope, relatively shallow soils, and poor soil drainage areas within unit. Slope instability/failure potential existing due to steep slope and soil water movement. | | | |
| Logging/Transportation | Field Review: B. Wilkinson/J. Graves, 8/16/93 | Office Review: M. Whitty, 9/16/93 | |
| Unit is accessed by Road #70-82-26.2. Partial suspension and visual constraints cannot be met. An IDT decision was made to treat this area (see 575-433, 575-434, 575-435) as one helicopter unit. This would eliminate need for road and meet retention VQO. Note: The present yarding would fly across Honker Divide. Fair economics. | | | |
| Watershed/Fisheries | Field Review: R. Rogers, 7/27/93 | Office Review: | |
| No streams in unit; no concerns. | | | |
| Soil/Geology | Field Review: R. Rogers, 7/27/93 | Office Review: | |
| Partial suspension yard for entire unit due to slope instability (thin, wet organic soils over shallow bedrock). <u>Geology/Karst (D. Herron/R. Horrocks, 8/20/93):</u> Unit traversed on foot - no limestone present, all non-carbonate rock. | | | |
| Wildlife | Field Review: A. Sullivan, 7/27/93 | Office Review: M. Hall | |
| Low deer use. No bear sign witnessed. Audible goose detection. Thorne Lake approximately 1/2 mile northeast of unit. No wildlife concerns. Contiguous old-growth tract; retain Level 1 structure. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, 7/30/93 | |
| Thorne Lake is visible from approximately 1,200' elevation. Landing is at approximately 1,280' elevation for uphill yarding option (noted by J. Graves and B. Wilkinson). Retention VQO to be met. | | | |
| Cultural/Lands | Field Review: | Office Review: | |
| | | | |
| Interdisciplinary Team Recommendations | | Reviewed By: | |
| Unit is within proposed Honker medium block. Helicopter partial cut (Type F) recommended for this strip (Units 575-431, 575-433, 575-434, 575-435) along mountainside, allows meeting retention VQO. Mitigation measures for this unit are as follows: V2 and selective harvest. COMBINED AS 575-433 WITH TYPE I CUT TO MEET RETENTION. | | | |







CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

UNIT : 432

QUAD : D3-SE



-  Revised Control Lake Project Boundary
-  Post-Field Unit Boundary w/ Setting Codes
-  Other Post-Field Unit Boundaries
-  USFS Timber Types for Volc 4-7
-  Eagle Tree Buffer of 330ft
-  Existing & Rebuilt Roads
-  F.S. Roads Under Construction
-  Post-Field Proposed Roads
-  Ahmu-Class 1 & Stream Chantypes
-  Ahmu-Class 2 & Stream Chantypes
-  Ahmu-Class 3 & Stream Chantypes
-  Channel Type Change

-  Lakes and Ponds
 Second Growth Units
 MMI 4
 McGilvery > 41
 Landings
 Stream & Lake NoCUT Buffers

.5 MILE

May 13, 1994

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

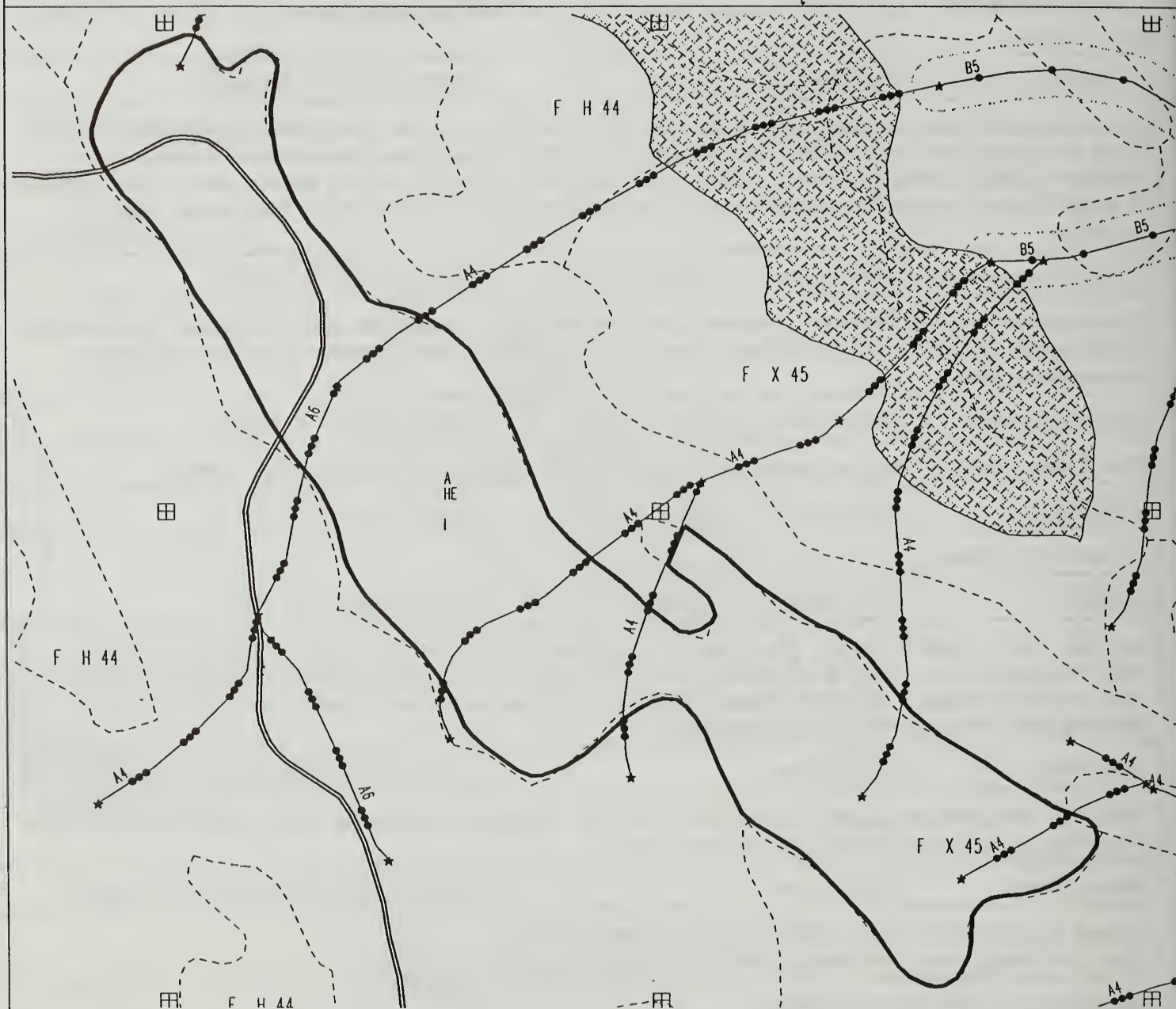
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|--|------------------------------------|---|---------------------------|
| VCU #: 575 | UNIT #: 432 | QUARTER QUAD: D3SE | PHOTO YR/#: 1991/1090-118 |
| ACRES: 33.2 | VOL.: 919.3 MBF | LOGGING SYSTEM: Swingyarder/Running Skyline | |
| LANDSCAPE ZONE: Unit is within proposed Honker Block and within the second quarter mile adjacent to the scenic river corridor. | | | |
| Timber/Vegetation | Field Review: S. Karstens | Office Review: J. Goering | |
| Species composition predominantly hemlock and cedar with a few spruce present. Regeneration predominantly hemlock with a few spruce but is lacking cedar. Low to moderate amounts of mistletoe infection evident in canopy. Windthrow damage present in northwest portion of unit associated with boggy/poor soil drainage areas. Poor regeneration in the north-central and western portion due to poor soil drainage and low site index soils. Fairly dense understory vegetation. | | | |
| Logging/Transportation | Field Review: T. Wetzel/D. Foster | Office Review: E. Urstadt | |
| Unit is accessed by Road #70-83-30. Unit has 2 spurs that total 300' of medium and easy construction. One landing will require guyline tags and a split level landing. Harvest system is mostly downhill running skyline with swingyarder. Economics are good. | | | |
| Watershed/Fisheries | Field Review: H. Sloan, 7/21/93 | Office Review: T. Stewart | |
| Class I stream that runs along northeastern border of unit requires 100' buffer on upper section of stream. | | | |
| Soil/Geology | Field Review: A. Sullivan, 7/21/93 | Office Review: T. Stewart | |
| No stability concerns. | | | |
| Wildlife | Field Review: A. Sullivan, 7/21/93 | Office Review: M. Hall | |
| Bear den - refer to wildlife overlay. Contiguous old-growth tract. Retain Level 1 structure. Heavy deer utilization - trails, beds and browse. Goshawk survey conducted - no detections. Thorne Lake approximately 1/3 mile southwest of unit. Avoid disturbance of wintering trumpeter swans by avoiding all human activity within 0.5 mile of known swan wintering areas during october 15 through March 15. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit is not visible from any priority travel routes or use areas. Maximum modification VQO. Recommend construction of parking area at southern end of access to Thorne Lake. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Maintain 100' buffer on north boundary plus an additional 100' selective cut area (portions of this extra 100' are not in unit). Recommend construction of parking area for three to four cars at southern end of unit for access to Thorne Lake. Retain some leave tree islands as wedges between yarding corridors. Wedges would be opportunities for independent sales. Type F (seed tree). Mitigation measures for this unit are as follows: F4, F5, F8, W1, W2, and Rec 1. | | | |

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

VCU : 575

UNIT : 433

QUAD : D3-SE



- Revised Control Lake Project Boundary
- Post-Field Unit Boundary w/ Setting Codes
- Other Post-Field Unit Boundaries
- USFS Timber Types for Volc 4-7
- Eagle Tree Buffer of 330ft
- Existing & Rebuilt Roads
- F.S. Roads Under Construction
- Post-Field Proposed Roads
- Ahmu-Class 1 & Stream Chantypes
- Ahmu-Class 2 & Stream Chantypes
- Ahmu-Class 3 & Stream Chantypes
- Channel Type Change

- Lakes and Ponds
- Second Growth Units
- MMI 4
- McGilvery > 41
- Landings
- Stream & Lake NoCUT Buffers

May 13, 1994

.5 MILE

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

| | | | |
|---|---|---|---------------------------|
| VCU #: 575 | UNIT #: 433 | QUARTER QUAD: D3SE | PHOTO YR/#: 1991/1090-198 |
| ACRES: 86.3 | VOL.: 1975.9 MBF | LOGGING SYSTEM: Slackline System with 70' Tower | |
| LANDSCAPE ZONE: Unit is within proposed Honker Block and the second quarter mile of adjacent to the scenic river corridor. | | | |
| Timber/Vegetation | Field Review: T. Stecher, 8/24/93 | Office Review: J. Goering | |
| Species composition predominantly hemlock with some cedar. Few spruce are present. Regeneration predominantly hemlock but includes a few cedar and spruce. Rocky, thin soils, exposed rock and poor soil drainage. Rock outcrops and numerous seeps present. Slope instability/failure potential existing due to steep slopes and soil water movement. Minimize soil compaction/displacement through use of full suspension. | | | |
| Logging/Transportation | Field Review: B. Wilkinson/J. Graves, 8/16/93 | Office Review: E. Urstadt | |
| Unit is accessed by Road #70-82-26.2. Engineer's estimate three acres of good timber is harvestable. For visuals reasons, unit was kept below 1250 feet. Unit boundary was put below rock bluffs. A 70 foot tower with slackline system will get partial suspension. Roding costs make cable logging impractical. Recommended helicopter logging as per IDT decision; see 575-431. | | | |
| Watershed/Fisheries | Field Review: R. Rogers, 7/26/93 | Office Review: T. Stewart | |
| Six Class III streams in unit require directional falling and split yarding. | | | |
| Soil/Geology | Field Review: R. Rogers, 7/26/93 | Office Review: T. Stewart | |
| Partial suspension yarding over lower portion of unit due to slope instability (thin, wet, organic soils). Drop area or full suspension yard bluffs above 1,250' elevation. Geology/Karst (D. Herron/R. Horrocks, 8/20/93): Unit surveyed from air adjacent unit traversed on foot. Non-carbonate bedrock, no karst or limestone observed. | | | |
| Wildlife | Field Review: A. Sullivan, 7/27/93 | Office Review: M. Hall | |
| No wildlife concerns. Low deer utilization. No bear sign. Contiguous old-growth; retain Level 1 structure. Thorne Lake approximately 1/2 mile northeast of unit. Avoid disturbance of wintering trumpeter swans by avoiding all human activity within 0.5 mile of known swan wintering areas during October 15 through March 15. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit not seen from any priority travel route or use area. Retention VQO to be met. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Helicopter single tree or group selection (Type I) recommended for this area (Units 575-431, 575-433, 575-434, 575-435), allows meeting Retention VQO. Originally the four units were analyzed for access by roading and cable logging, however, upon review the prescription was changed since this approach would not meet Retention VQO nor provide resource protection for soils or streams. This combined unit still needs an access road from units 575-436 to 575-430. Six Class III streams require directional falling and split yarding. Mitigation measures for this unit are as follows: F6, F8, V2, W2, and selective harvest. | | | |

NO UNIT MAP

UNIT DROPPED OR DEFERRED

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

| | | | |
|---|--------------------------------------|------------------------------------|---------------------------|
| VCU #: 575 | UNIT #: 434 | QUARTER QUAD: D3SE | PHOTO YR/#: 1991/1090-119 |
| ACRES: | VOL.: | LOGGING SYSTEM: | |
| LANDSCAPE ZONE: | | | |
| Timber/Vegetation | Field Review: T. Stecher | Office Review: J. Goering | |
| <p>Species composition predominantly hemlock with some cedar. Few spruce are present. Regeneration mostly on nurse logs and consists of hemlock, spruce and cedar. Regeneration generally poor due to poor soil drainage.</p> <p>Slope instability/failure/erosion potential existing due to soil water movement.</p> | | | |
| Logging/Transportation | Field Review: B. Wilkinson/J. Graves | Office Review: E. Urstadt, 9/22/93 | |
| <p>Unit is accessed by Road #70-82-26.2. The unit is visually restricted by Honker Divide. Approximately 3 acres of good timber is harvestable. Low volume, small acreage, and visual concerns suggest dropping this unit.</p> | | | |
| Watershed/Fisheries | Field Review: R. Rogers, 7/17/93 | Office Review: | |
| <p>Stream 1 is Class III; directional fall, split yard away from stream.</p> | | | |
| Soil/Geology | Field Review: R. Rogers, 7/17/93 | Office Review: | |
| <p>Trim off top of unit above 1,200' if partial suspension cannot be obtained. Wet, thin soils present over most of unit.</p> | | | |
| Wildlife | Field Review: R. Rogers, 7/17/93 | Office Review: M. Hall | |
| <p>No concerns - contiguous old-growth; retain Level 1 structure.</p> | | | |
| Visual/Recreation | Field Review: R. Rogers, 7/17/93 | Office Review: | |
| <p>Retention VQO to be met.</p> | | | |
| Cultural/Lands | Field Review: | Office Review: S. Bedross, 7/30/93 | |
| <p>Keep below 1200' due to visibility from Thorne Lake.</p> | | | |
| Interdisciplinary Team Recommendations | | | |
| <p>Dropped due to visual concerns, lack of unit area, and low volume.</p> | | | |

This unit is combined with unit 575-433.

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

| | | | |
|--|--------------------------------------|------------------------------------|---------------------------|
| VCU #: 575 | UNIT #: 435 | QUARTER QUAD: D3SE | PHOTO YR/#: 1991/1090-119 |
| ACRES: | VOL.: | LOGGING SYSTEM: Helicopter | |
| LANDSCAPE ZONE: | | | |
| Timber/Vegetation | Field Review: J. Miller | Office Review: J. Goering | |
| Species composition predominantly hemlock but includes some spruce and cedar. Regeneration predominantly hemlock and includes a few cedar but is lacking spruce. Rock bluffs on the higher elevations of the unit. Steep slope, thin soils, and very poor soil drainage. Promote spruce regeneration through planting. | | | |
| Logging/Transportation | Field Review: B. Wilkinson/J. Graves | Office Review: E. Urstadt | |
| Unit is accessed by Rd #70-82-26.2. A 70' tower using highlead can harvest the unit. 65% is downhill and 35% is uphill logging. Area of required partial suspension was eliminated for visual constraints. Three landings will be used to avoid logging over bluffs. Economics are fair. | | | |
| Watershed/Fisheries | Field Review: R. Rogers, 7/17/93 | Office Review: | |
| Streams 1 and 2 are Class III; directional fall, split yard. | | | |
| Soil/Geology | Field Review: R. Rogers, 7/17/93 | Office Review: | |
| Maintain partial suspension above 1,200' elevation. Keep road cuts and cut angles to minimum. Highly erodible soils. | | | |
| Wildlife | Field Review: R. Rogers, 7/17/93 | Office Review: M. Hall | |
| Moderate deer use. No special concerns. Retain Level 1 structure. | | | |
| Visual/Recreation | Field Review: R. Rogers 7-17-93 | Office Review: | |
| Retention VQO to be met. | | | |
| Cultural/Lands | Field Review: | Office Review: S. Bedross, 7/30/93 | |
| Keep below 1,300' due to visibility from Thorne Lake. | | | |
| Interdisciplinary Team Recommendations | | Reviewed By: | |
| Unit is within proposed Honker medium block. Helicopter partial cut (Type F) recommended for this strip (Units 575-431, 575-433, 575-434, 575-435), allows meeting retention VQO. Mitigation measures for this unit are as follows: V2 and selective harvest. COMBINED AS 575-433 WITH TYPE I CUT TO MEET RETENTION. | | | |

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

VCU : 575

UNIT : 436

QUAD : D3-SE



- Revised Control Lake Project Boundary
- Post-Field Unit Boundary w/ Setting Codes
- Other Post-Field Unit Boundaries
- USFS Timber Types for Volc 4-7
- Eagle Tree Buffer of 330ft
- Existing & Rebuilt Roads
- F.S. Roads Under Construction
- Post-Field Proposed Roads
- Ahmu-Class 1 & Stream Chantypes
- Ahmu-Class 2 & Stream Chantypes
- Ahmu-Class 3 & Stream Chantypes
- Channel Type Change

- Lakes and Ponds
- Second Growth Units
- MMI 4
- McGilvery > 41
- Landings
- Stream & Lake NoCUT Buffers

June 09, 1994

.5 MILE

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

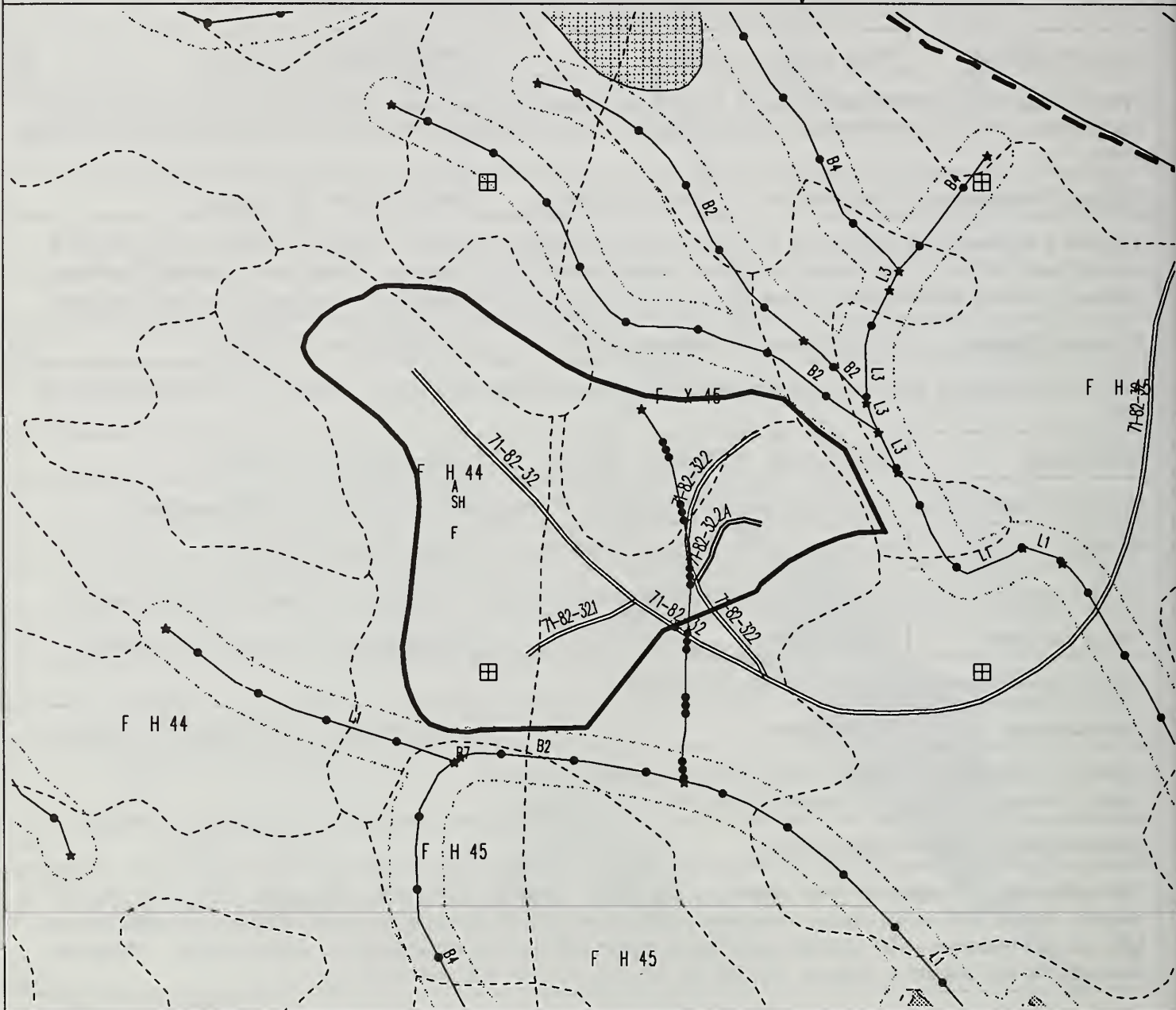
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| VCU #: 575 | UNIT #: 436 | QUARTER QUAD: D3SE | PHOTO YR/#: 1991/1090-19 |
| ACRES: 20.6 | VOL.: 474.4 MBF | LOGGING SYSTEM: Swingyarder/Running Skyline | |
| LANDSCAPE ZONE: Unit is in proposed Honker Block. | | | |
| Timber/Vegetation | Field Review: G. Hedin | Office Review: J. Goering | |
| Species composition predominantly hemlock but includes some spruce and cedar. Regeneration predominantly hemlock but includes a few cedar and spruce. Rock bluffs on the higher elevations of the unit. Some thin soil, poor soil drainage areas. | | | |
| Logging/Transportation | Field Review: E. Urstadt/J. Herzberg | Office Review: E. Urstadt | |
| The unit is accessed by Rd #70-82-34.1 which has easy construction in this unit. Logging system is swingyard; 85% downhill and 15% up. A 100' select cut buffer is along the lake to the southeast. Partial cut is feasible. Guystumps to east are in muskeg and will need twistors for guys. Blowdown may be a concern on west end. Economics are good. | | | |
| Watershed/Fisheries | Field Review: S. Tanguay, 7/17/93 | Office Review: T. Stewart | |
| Two small channels in unit; split yard required. 100' select cut buffer on Class II < 50A Lake. Cut only trees > 15" DBH. | | | |
| Soil/Geology | Field Review: S. Tanguay, 7/17/93 | Office Review: T. Stewart | |
| Moderate to steep slopes. Keep unit below 1,600' where bluffs are present with little or no timber on them. | | | |
| Wildlife | Field Review: S. Tanguay, 7/17/93 | Office Review: M. Hall | |
| Level 1 retention. Conducted goshawk survey in unit with no response. Goose scat and feathers identified in unit. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit not seen from any priority travel route or use area. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Unit redesigned to mitigate the visual impacts on top of unit. Area deleted to retain snag patch. Split yard Class III streams. Retain 50% crown canopy of dominant/codominant trees (Type H shelterwood). 100' no cut buffer between lake and unit boundary. 400' selective cut (Type I) buffer will also help maintain goose nesting habitat. Mitigation measures for this unit are as follows: F4, F5, F6, F8, V1, V2, V3, W2, and W11. | | | |



















CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

VCU : 575

UNIT : 437

QUAD : D3-SE



- | | | | |
|---|---|---|-----------------------------|
|  | Revised Control Lake Project Boundary |  | Lakes and Ponds |
|  | Post-Field Unit Boundary w/ Setting Codes |  | Second Growth Units |
|  | Other Post-Field Unit Boundaries |  | MMI 4 |
|  | USFS Timber Types for Volc 4-7 |  | McGilvery > 41 |
|  | Eagle Tree Buffer of 330ft |  | Landings |
|  | Existing & Rebuilt Roads |  | Stream & Lake NoCUT Buffers |
|  | F.S. Roads Under Construction | | |
|  | Post-Field Proposed Roads | | |
|  | Ahmu-Class 1 & Stream Chantypes | | |
|  | Ahmu-Class 2 & Stream Chantypes | | |
|  | Ahmu-Class 3 & Stream Chantypes | | |
|  | Channel Type Change | | |

March 17, 1995

.5 MILE

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

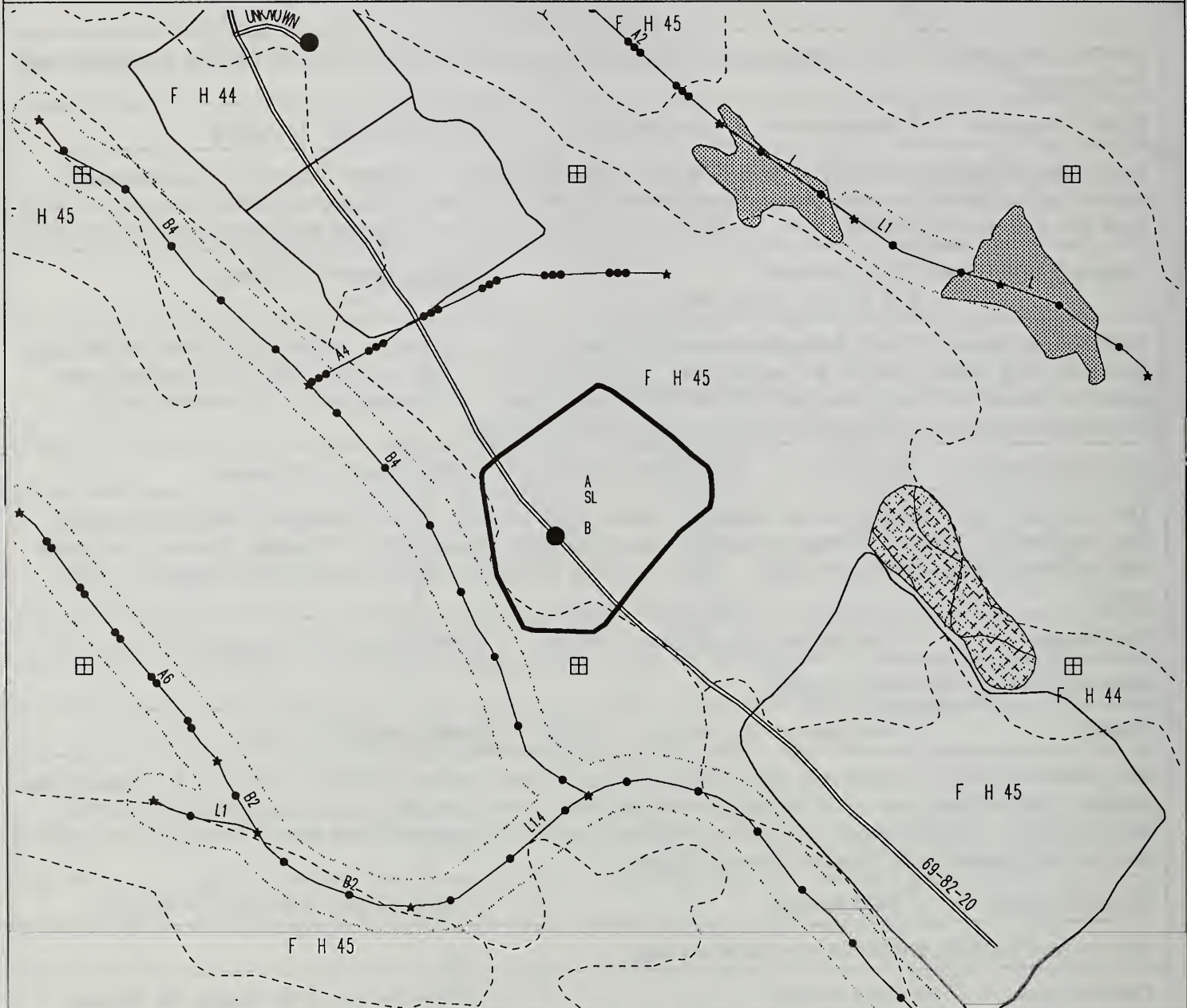
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|---|--|--|---------------------------|
| VCU #: 575 | UNIT #: 437 | QUARTER QUAD: D3SE | PHOTO YR/#: 1991/1090-121 |
| ACRES: 55.7 | VOL.: 2091.1 MBF | LOGGING SYSTEM: 90% Shovel Log/10% Swingyard/ Running Skyline | |
| LANDSCAPE ZONE: Unit is within proposed Honker Block and within second quarter mile adjacent to proposed scenic river corridor. | | | |
| Timber/Vegetation | Field Review: B. Hasebe, 8/17/93 | Office Review: J. Goering | |
| Species composition predominantly hemlock with some cedar. Few spruce are present. Regeneration predominantly hemlock and includes a few cedar but is generally lacking spruce. Light amount of mistletoe infection evident in canopy. Some thin soil, poor soil drainage areas. Fairly dense understory vegetation. Generally poor regeneration in some areas. | | | |
| Logging/Transportation | Field Review: S. Field/J. Graves, 9/01/93 | Office Review: K. Jehnke | |
| Rd #70-83-32 crosses a Class I stream because that is the best location. Unit will be shovel logged (90%) on the flatter areas and swing yarded (10%) on the steeper areas. Part of this unit is along the Scenic River LUD line which may require a "survey" to define its location; however this location is best. An alternate route to the northeast was recommended and was on steeper ground with multiple muskeg crossing. | | | |
| Watershed/Fisheries | Field Review: M. Minnillo, 8/09/93 | Office Review: T. Stewart | |
| There are three Class I streams and one Class III stream in unit. Stream 1 is Class I along east side of unit; flagged B/W, 100' buffer. Stream 2 is Class I along the northeast boundary; flagged B/W, 100' buffer. Stream 4 along south unit boundary is flagged B/W, 100' buffer. Stream 3 is Class III through central portion of unit; flagged O/W, split yard. | | | |
| Soil/Geology | Field Review: M. Minnillo, 8/09/93 | Office Review: T. Stewart | |
| Relatively flat unit. No stability concern. | | | |
| Wildlife | Field Review: M. Minnillo, 8/09/93 | Office Review: M. Hall | |
| Snag retention Level 2. Recommend leaving a patch of trees in the central west portion of unit in the Y of planned road location. This will help provide cover/forage for deer and bear moving through the area. Snags will also be left in stream buffers. Avoid disturbance of wintering trumpeter swans by avoiding all human activity within 0.5 mile of known swan wintering areas during October 15 through March 15. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit not seen from any priority travel route or use area. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Type F harvest (seed tree) to maintain structure in unit, leaving all unmerchantable and snags in groups. Maintain 100' no-cut stream buffers on northeast and south boundary of unit. Mitigation measures for this unit are as follows: F4, F5, F6, F8, F10, W2, and W11. | | | |

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

VCU : 575

UNIT : 438

QUAD : D3-SW



- Revised Control Lake Project Boundary
- Post-Field Unit Boundary w/ Setting Codes
- Other Post-Field Unit Boundaries
- USFS Timber Types for Volc 4-7
- Eagle Tree Buffer of 330ft
- Existing & Rebuilt Roads
- F.S. Roads Under Construction
- Post-Field Proposed Roads
- Ahmu-Class 1 & Stream Chantypes
- Ahmu-Class 2 & Stream Chantypes
- Ahmu-Class 3 & Stream Chantypes
- Channel Type Change

- Lakes and Ponds
- Second Growth Units
- MMI 4
- McGilvery > 41
- Landings
- Stream & Lake NoCUT Buffers

May 13, 1994

.5 MILE

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

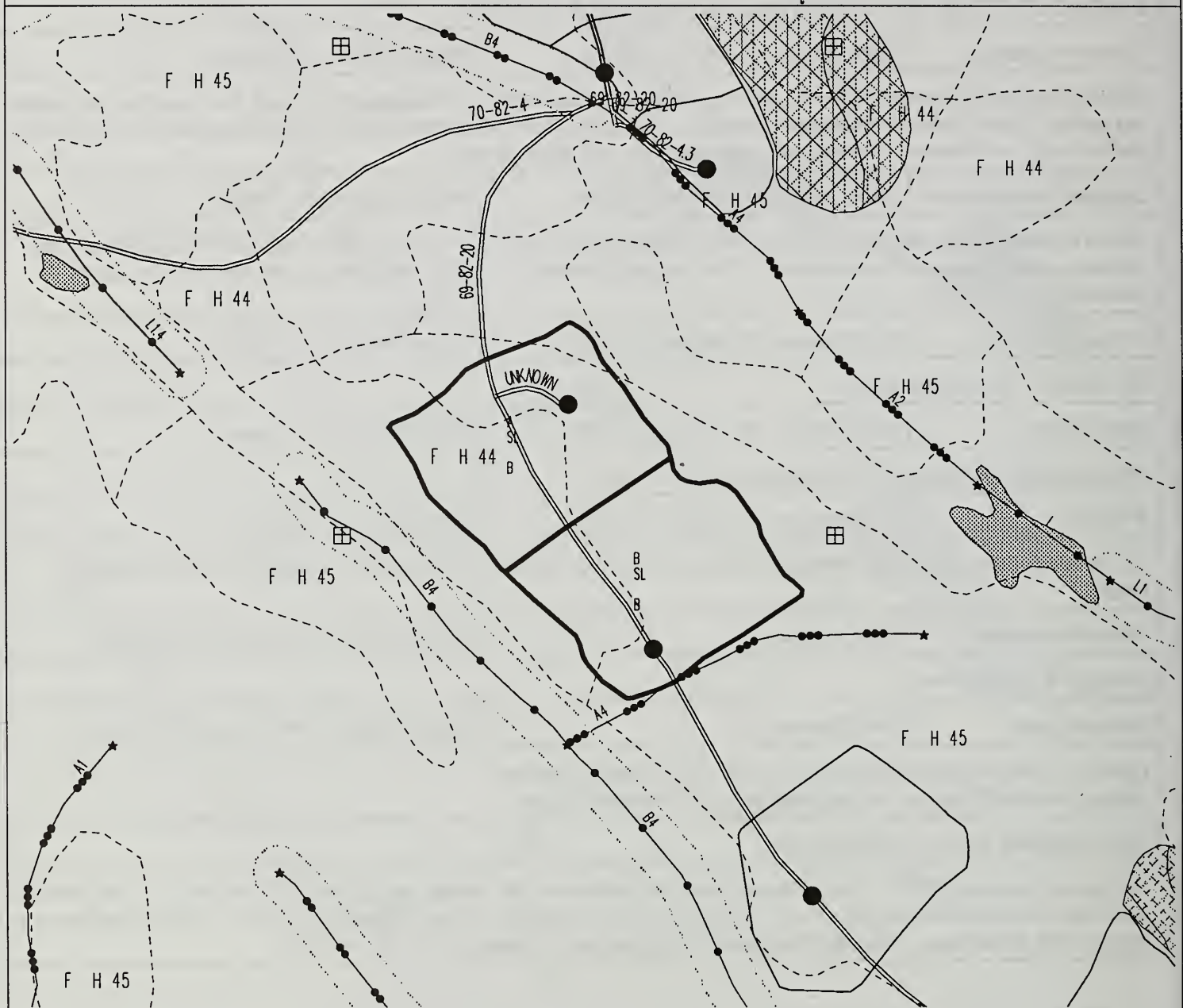
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|---|-----------------------------------|--|---------------------------|
| VCU #: 575 | UNIT #: 438 | QUARTER QUAD: D3SW | PHOTO YR/#: 1991/1090-169 |
| ACRES: 14.1 | VOL.: 389.3 MBF | LOGGING SYSTEM: Slackline System with 100' Tower | |
| LANDSCAPE ZONE: Unit is within proposed Honker Block. | | | |
| Timber/Vegetation | Field Review: J. Miller, 7/17/93 | Office Review: J. Goering | |
| Species composition includes hemlock, spruce, and cedar. Regeneration predominantly hemlock but includes a few cedar and spruce. Rock bluffs on the higher elevations of the unit. Light windthrow damage evident throughout the unit due to shallow soils over bedrock. Many small seeps and poor soil drainage areas. | | | |
| Logging/Transportation | Field Review: S. Field/D. Keister | Office Review: E. Urstadt | |
| Unit is accessed by Rd #69-82-20. Recommend slackline system with 100' tower. Blowdown may be a problem. The unit was marked below cliffs to northeast. Unit has good economics. Partial suspension is not required, but can be achieved. | | | |
| Watershed/Fisheries | Field Review: R. Rogers, 7/13/93 | Office Review: T. Stewart | |
| No concerns. No streams in unit. | | | |
| Soil/Geology | Field Review: R. Rogers, 7/13/93 | Office Review: T. Stewart | |
| Attempt partial suspension over entire unit due to thin soils. | | | |
| Wildlife | Field Review: H. Sloan, 7/14/93 | Office Review: M. Hall | |
| No concerns. Level 1 structure retention. Goshawk survey conducted - no detections. Contiguous western hemlock forest. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Retention VQO to be met. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Unit meets Retention VQO. Class I stream below unit requires a 100' no-cut and 50' selective cut buffer. Unit boundary modified to exclude bluffs at top of unit. Type B clearcut due to thin soils and windthrow potential. Partial suspension to mitigate soil disturbance. Mitigation measures for this unit are as follows: F5, F8, and W4. | | | |













CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD







VCU : 575

UNIT : 439

QUAD : D3-SW



-  Revised Control Lake Project Boundary
-  Post-Field Unit Boundary w/ Setting Codes
-  Other Post-Field Unit Boundaries
-  USFS Timber Types for Volc 4-7
-  Eagle Tree Buffer of 330ft
-  Existing & Rebuilt Roads
-  F.S. Roads Under Construction
-  Post-Field Proposed Roads
-  Ahmu-Class 1 & Stream Chantypes
-  Ahmu-Class 2 & Stream Chantypes
-  Ahmu-Class 3 & Stream Chantypes
-  Channel Type Change

-  Lakes and Ponds
 Second Growth Units
 MMI 4
 McGilvery > 41
 Landings
 Stream & Lake NoCUT Buffers

.5 MILE

June 09, 1994

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

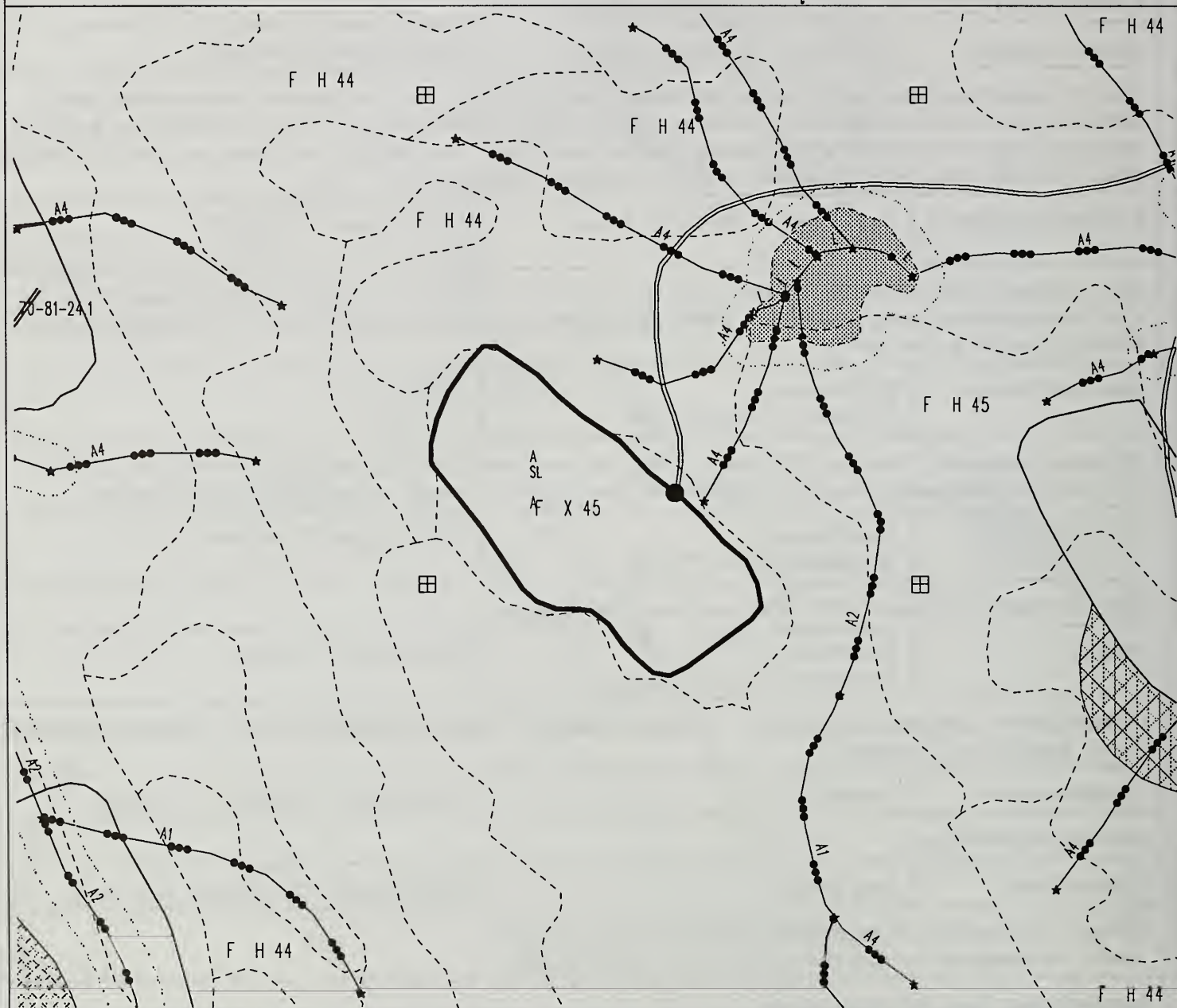
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|---|---|---|--------------------------|
| VCU #: 575 | UNIT #: 439 | QUARTER QUAD: D3 SW/SE | PHOTO YR/#: 1991/690-170 |
| ACRES: 29.5 | VOL.: 985.5 MBF | LOGGING SYSTEM: Slackline System with 70' Tower | |
| LANDSCAPE ZONE: Unit within proposed Honker Block. | | | |
| Timber/Vegetation | Field Review: B. Hasebe, 8/6/93 | Office Review: J. Goering | |
| Species composition predominantly hemlock but includes some spruce and cedar. Regeneration predominantly hemlock with a few spruce but is lacking cedar. Windthrow damage present in eastern portion of unit. Rock bluffs on the higher elevations of the unit with much wildlife sign on benches below them. Some thin soil, steep slope, and poor soil drainage areas. Full suspension over slope benches in order to minimize soil displacement. | | | |
| Logging/Transportation | Field Review: S. Field/D. Keister, 8/23/93 | Office Review: E. Urstadt | |
| Unit is accessed by Rd #69-82-20. Harvest system is slackline with 70' tower. Blowdown will be minimized by leaving a 50' nonmerchantable buffer on all sides. Timber above bluffs to northeast was excluded but can be helicopter logged. Economics are fair for this unit. | | | |
| Watershed/Fisheries | Field Review: H. Sloan/D. Crowe, 7/23/93 | Office Review: | |
| No streams within unit. Maintain TTRA buffer at least 100' away from Class I stream on western boundary and Class III stream along southeastern boundary, flagged O/W. Directionally fall timber into unit along Class III stream. | | | |
| Soils/Geology | Field Review: H. Sloan/D. Crowe, 7/23/93 | Office Review: T. Stewart | |
| Thin soils, bluffs, and slopes >70% at the northeastern unit boundary. | | | |
| Wildlife | Field Review: H. Sloan/D. Crowe, 7/23/93 | Office Review: M. Hall | |
| Goshawk survey conducted - no detections. Woodpecker observed. Goose scat identified in unit. Contiguous old-growth forest. Retain Level 1 structure. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Retention VQO to be met. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Leave 50' unmerchantable stripe on unit boundaries. Type B clearcut due to thin soils and windthrow potential. Maintain 100' no-cut and 50' selective cut buffer on Class I stream to the southwest. Directionally fall trees away from Class III stream on southeast boundary. Use slackline system to obtain partial suspension to mitigate soils concerns. Mitigation measures for this unit are as follows: F1, F3, F5, F8, F10, V1, and W4. | | | |

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

VCU : 576

UNIT : 401

QUAD : D3-SW



- Revised Control Lake Project Boundary
- Post-Field Unit Boundary w/ Setting Codes
- Other Post-Field Unit Boundaries
- USFS Timber Types for Volc 4-7
- Eagle Tree Buffer of 330ft
- Existing & Rebuilt Roads
- F.S. Roads Under Construction
- Post-Field Proposed Roads
- Ahmu-Class 1 & Stream Chantypes
- Ahmu-Class 2 & Stream Chantypes
- Ahmu-Class 3 & Stream Chantypes
- Channel Type Change

- Lakes and Ponds
- Second Growth Units
- MMI 4
- McGilvery > 41
- Landings
- Stream & Lake NoCUT Buffers

May 13, 1994

0.5 MILE

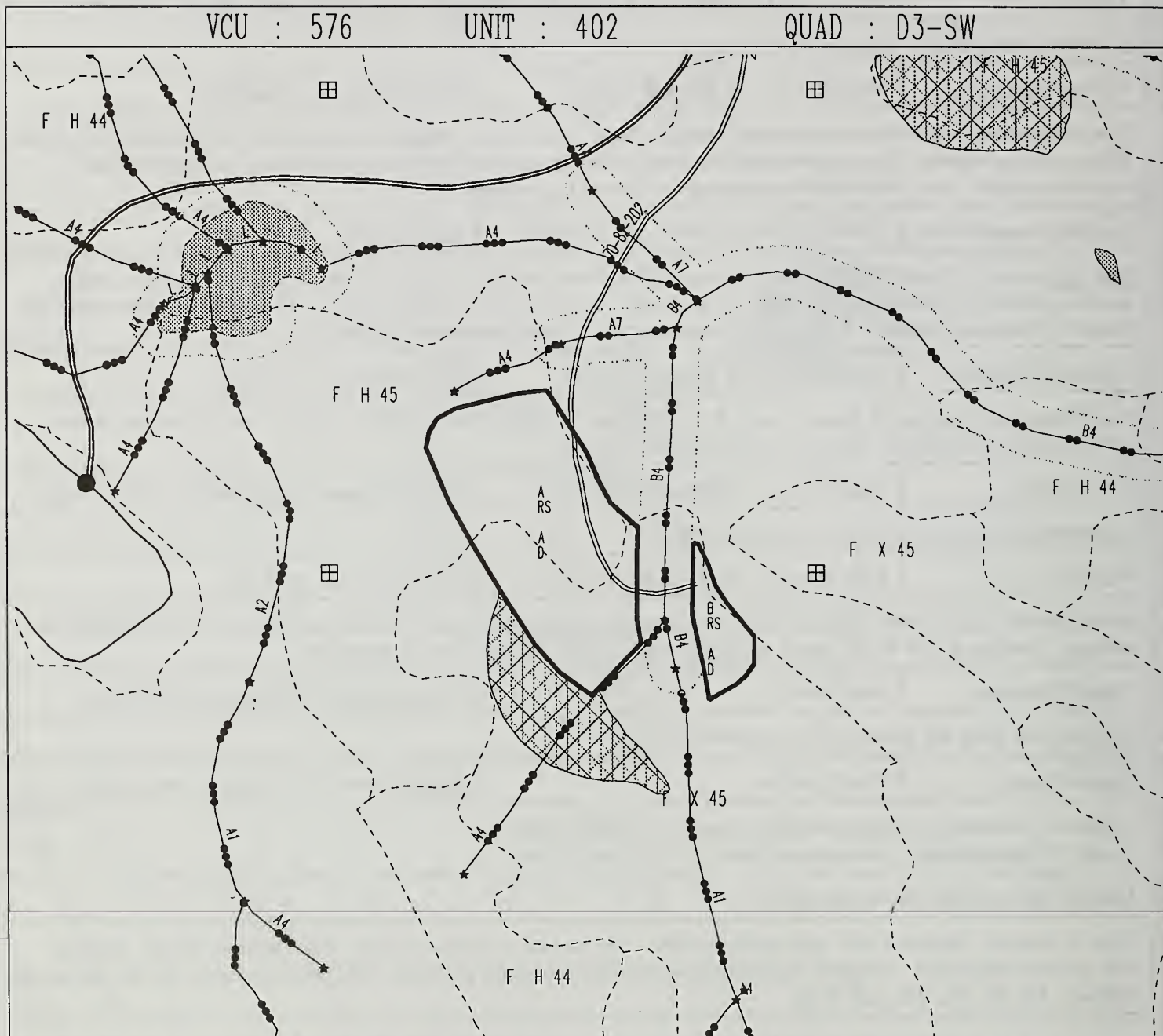
CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

| | | | |
|--|--------------------------------------|--|-------------------------|
| VCU #: 576 | UNIT #: 401 | QUARTER QUAD: D3SW | PHOTO YR/#: 1991/990-89 |
| ACRES: 20.6 | VOL.: 573.4 MBF | LOGGING SYSTEM: Slackline System with 100' Tower | |
| LANDSCAPE ZONE: Unit is in Honker Block. | | | |
| Timber/Vegetation | Field Review: T. Stecher, 6/23/93 | Office Review: J. Goering | |
| Low volume with a species composition of hemlock, cedar, and spruce. Regeneration composed of hemlock but includes a few cedar and spruce. Poor regeneration due to thin soils, poor soil drainage, high elevation, soil instability and erosive potential. Lack of advanced regeneration and nurse log material. | | | |
| Logging/Transportation | Field Review: B. Wilkinson/T. Wetzel | Office Review: E. Urstadt | |
| Unit is accessed by Rd #70-82-29. The landing is located in a muskeg; twisters may be necessary. Recommended harvest system is downhill slackline with a 100' tower. There is 300' of TTRA buffer on the north side. The buffer has possible blowdown problem. Economics for unit are good. Partial suspension required. | | | |
| Watershed/Fisheries | Field Review: B. Romey, 6/15/93 | Office Review: T. Stewart | |
| Recommend split yarding on Stream 1 with full suspension crossing stream. Buffer to slope break to prevent excess sediment deposit in stream. Selective harvest within buffer. | | | |
| Soils/Geology | Field Review: M. Minnillo, 6/15/93 | Office Review: T. Stewart | |
| Supersaturated soils, mud slides, instability noted. | | | |
| Wildlife | Field Review: M. Minnillo, 6/15/93 | Office Review: M. Hall | |
| Muskeg north of unit shows high deer use, also much goose sign. Wolf scat near lake north of unit. Woodpecker use evident. Maintain a 100' buffer along muskeg to north of unit. Retain Level 1 structure. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit not seen from any priority travel route or use area. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Type A clearcut. Maintain 100' road buffer on lake. No streams or buffers in unit. Use slackline system, maintain best possible suspension. Schedule regeneration survey due to possible problems. Mitigation measures for this unit are as follows: F4; F6, F8, W5, and W11. | | | |

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

UNIT : 402

QUAD : D3-SW



- | | | | |
|--|---|--|-----------------------------|
| | Revised Control Lake Project Boundary | | Lakes and Ponds |
| | Post-Field Unit Boundary w/ Setting Codes | | Second Growth Units |
| | Other Post-Field Unit Boundaries | | MMI 4 |
| | USFS Timber Types for Volc 4-7 | | McGilvery > 41 |
| | Eagle Tree Buffer of 330ft | | Landings |
| | Existing & Rebuilt Roads | | Stream & Lake NoCUT Buffers |
| | F.S. Roads Under Construction | | |
| | Post-Field Proposed Roads | | |
| | Ahmu-Class 1 & Stream Chantypes | | |
| | Ahmu-Class 2 & Stream Chantypes | | |
| | Ahmu-Class 3 & Stream Chantypes | | |
| | Channel Type Change | | |

June 09, 1994

.5 MILE

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

| | | | |
|--|--------------------------------------|---|-------------------------|
| VCU #: 576 | UNIT #: 402 | QUARTER QUAD: D3SW | PHOTO YR/#: 1991/990-89 |
| ACRES: 17.1 | VOL.: 443.0 MBF | LOGGING SYSTEM: Swingyard/Running Skyline, Shovel Logging | |
| LANDSCAPE ZONE: Unit is in western Honker Watershed but outside proposed Honker block. | | | |
| Timber/Vegetation | Field Review: J. Goering, 6/23/93 | Office Review: J. Goering | |
| Species composition predominantly hemlock but includes some spruce and cedar. Regeneration predominantly hemlock with some spruce but is generally lacking cedar. Regeneration concerns due to shallow rocky soils and the presence of salmonberry on upper slopes. Probable salmonberry incursions with soil disturbance based on existing densities. Rock outcrops and boulder strewn slopes present in upper elevations. Alaska yellow-cedar decline evident along the northern boundary. Recommend 100' buffer from stream and retention of unsuitable upper slope areas. Partial retention of southwest portion recommended due to rocky site and regeneration concerns. | | | |
| Logging/Transportation | Field Review: B. Wilkinson/K. Martin | Office Review: E. Urstadt | |
| 1/2 mile of Rd #70-82-20.2 is needed for access. The harvest system is downhill swing-yard. Equipment or deadman may be needed for guys at north end. Unit size was reduced due to bluffs, blind leads, and low volume. Unit economics are marginal. | | | |
| Watershed/Fisheries | Field Review: B. Romey, 6/15/93 | Office Review: T. Stewart | |
| 100' buffer on Class II stream that bisects unit on southeast. | | | |
| Soils/Geology | Field Review: B. Romey, 6/15/93 | Office Review: T. Stewart | |
| McGilvery soils present in southwest corner of unit. Wet soils on top of bedrock with pistol-butted trees. | | | |
| Wildlife | Field Review: M. Minnillo, 6/15/93 | Office Review: M. Hall | |
| No concerns. Heavy deer sign/use throughout area. Structure retention will be retained in stream buffer; Level 1 retention maintained | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit not visible from any priority travel routes or use areas. Maximum Modification VQO. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| McGilvery soil area excluded from unit. Small blind lead area exists south of stream buffer tip. Leave wildlife area, structure, and snags in area between Streams 1 and 2. Stream 3 is Class II; requires 100' buffer in northernmost part of unit near road (post field season office review indicated conflicting unit location, buffer not flagged). Plot 2 could contain a record-size spruce for Alaska - 64" - 198'. Partial suspension possible; maintain best suspension where possible. Downhill yarding prohibits effective partial cutting. Type A and D clearcut. Swingyard/Running Skyline shovel log. Mitigation measures for this unit are as follows: F1, F5, F6, F8, W1; and W5. | | | |

NO UNIT MAP

UNIT DROPPED OR DEFERRED

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

| | | | |
|--|------------------------------------|------------------------|--------------------------|
| VCU #: 576 | UNIT #: 403 | QUARTER QUAD: D3SW | PHOTO YR/#: 1991/690-173 |
| ACRES: | VOL.: | LOGGING SYSTEM: | |
| LANDSCAPE ZONE: | | | |
| Timber/Vegetation | Field Review: | Office Review: | |
| | | | |
| Logging/Transportation | Field Review: | Office Review: | |
| | | | |
| Watershed/Fisheries | Field Review: B. Romey, 6/15/93 | Office Review: | |
| TTRA required 100' buffer on Class IIa stream 1. | | | |
| Soils/Geology | Field Review: M. Minnillo, 6/15/93 | Office Review: | |
| No concerns, but McGilvery at north end. | | | |
| Wildlife | Field Review: M. Minnillo, 6/15/93 | Office Review: M. Hall | |
| No concerns. Retain Level 2 structure due to narrowness of affected old-growth patch and proximity to two large HCC's. | | | |
| Visual/Recreation | Field Review: | Office Review: | |
| | | | |
| Cultural/Lands | Field Review: | Office Review: | |
| | | | |
| Interdisciplinary Team Recommendations | | | |
| Unit is adjacent to clearcut to the south. Deferred. | | | |

NO UNIT MAP
UNIT DROPPED OR DEFERRED

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

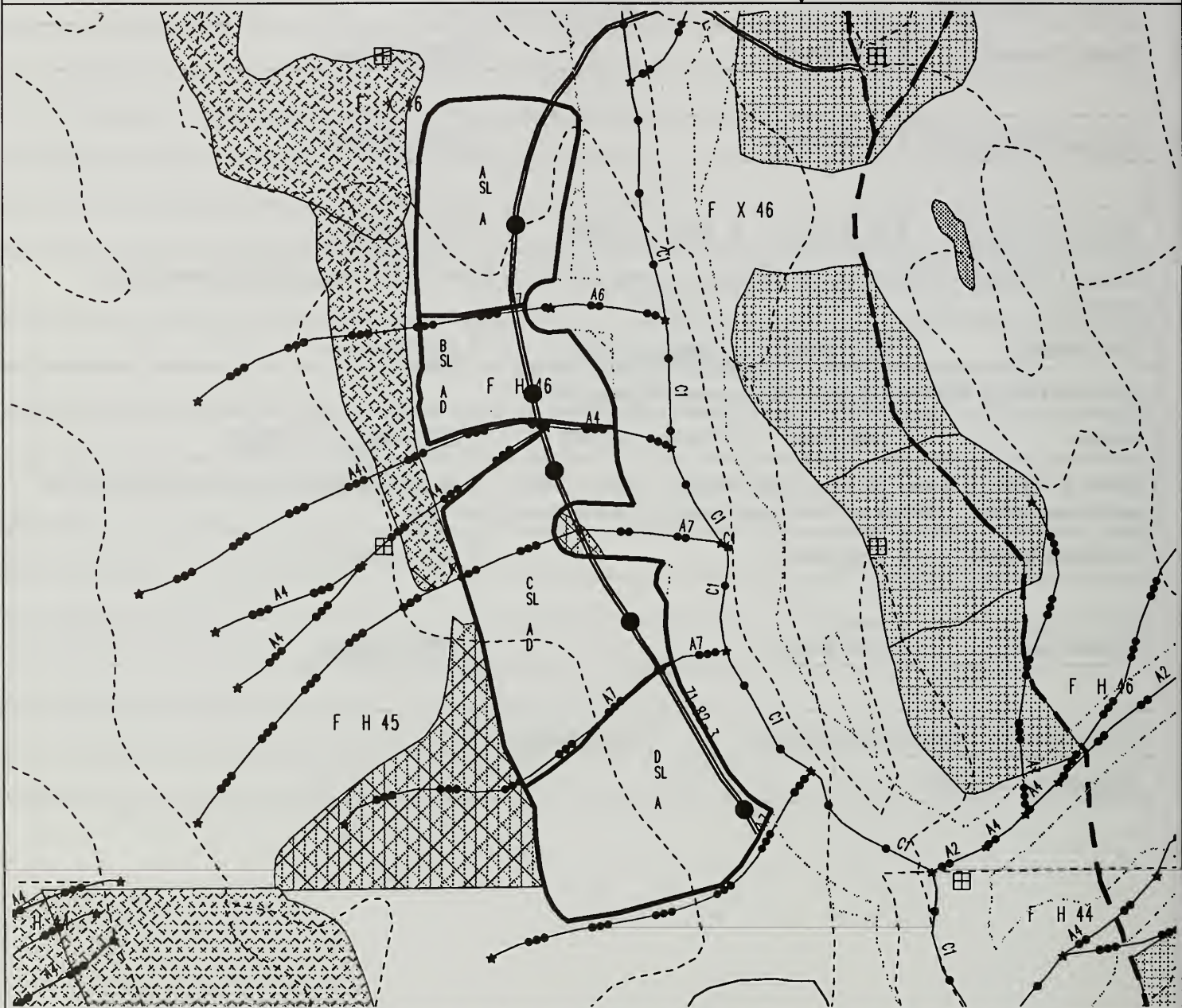
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|--|----------------------------------|------------------------|--------------------------|
| VCU #: 576 | UNIT #: 404 | QUARTER QUAD: | PHOTO YR/#: 1991/690-173 |
| ACRES: | VOL.: | LOGGING SYSTEM: | |
| LANDSCAPE ZONE: | | | |
| Timber/Vegetation | Field Review: | Office Review: | |
| | | | |
| Logging/Transportation | Field Review: | Office Review: | |
| | | | |
| Watershed/Fisheries | Field Review: B. Romey, 7/20/93 | Office Review: | |
| Stream 1 is Class III; directional fall, split yard, exclude alluvial fan below start of flagging from harvest due to instability. | | | |
| Soils/Geology | Field Review: R. Rogers, 7/20/93 | Office Review: | |
| Entire unit below bluffs are MMI4. Recommend dropping unit. | | | |
| Wildlife | Field Review: D. Crowe, 7/20/93 | Office Review: M. Hall | |
| Retain structure on terrace between rocky outcrops running. West to south through entire unit for deer, bear and red-tailed hawk habitat. Marten and wolf sign identified. Retain Level 1 structure. | | | |
| Visual/Recreation | Field Review: | Office Review: | |
| | | | |
| Cultural/Lands | Field Review: | Office Review: | |
| | | | |
| Interdisciplinary Team Recommendations | | Reviewed By: | |
| Dropped due to MMI4. | | | |

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

VCU : 576

UNIT : 405

QUAD : D3-SW



- Revised Control Lake Project Boundary
- Post-Field Unit Boundary w/ Setting Codes
- Other Post-Field Unit Boundaries
- USFS Timber Types for Volc 4-7
- Eagle Tree Buffer of 330ft
- Existing & Rebuilt Roads
- F.S. Roads Under Construction
- Post-Field Proposed Roads
- Ahmu-Class 1 & Stream Chantypes
- Ahmu-Class 2 & Stream Chantypes
- Ahmu-Class 3 & Stream Chantypes
- Channel Type Change

- Lakes and Ponds
- Second Growth Units
- MMI 4
- McGilvery > 41
- Landings
- Stream & Lake NoCUT Buffers

March 17, 1995

.5 MILE

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

| | | | |
|---|--|---|--------------------------|
| VCU #: 576 | UNIT #: 405 | QUARTER QUAD: D3SW | PHOTO YR/#: 1991/690-174 |
| ACRES: 51.2 | VOL.: 1869.2 MBF | LOGGING SYSTEM: Slackline with 100' Tower | |
| LANDSCAPE ZONE: Unit is in the Honker Block. | | | |
| Timber/Vegetation | Field Review: M. Case, 8/5/93 | Office Review: J. Goering | |
| Species composition consists of hemlock, cedar, and spruce. Regeneration predominantly hemlock but includes some spruce. Lacking western red cedar regeneration. Regeneration concerns due to the presence of salmonberry. Windthrow patches with abundant salmonberry present. Rockslide present in middle portion of stand. | | | |
| Logging/Transportation | Field Review: J. Doyal/J. Graves, 8/3/93 | Office Review: J. Doyal | |
| Unit is accessed by Road #71-82-3. A 100 foot tower with slackline is required to achieve partial suspension. If partial suspension requirements are waived, a swing yarder with running skyline could harvest the unit. Maximum yarding distance is 500 feet. Ninety percent of yarding is downhill. A 200 foot buffer is along the east boundary. Unit was placed below 350 feet elevation due to soils concerns. | | | |
| Watershed/Fisheries | Field Review: R. Rogers, 7/15/93 | Office Review: T. Stewart | |
| Streams 1 and 2 are Class III, directional fall split yard. Stream 3, directional fall, split yard. Stream 4 requires 100' buffer and 100' no program harvest buffer for C1 channel type. | | | |
| Soils/Geology | Field Review: R. Rogers, 7/15/93 | Office Review: T. Stewart | |
| Areas 1 and 2 at upper part of unit - dropped due to unstable conditions associated with McGilvery soils and MMI4 conditions respectively. Area 3 - attempt full suspension. Area 4 - prefer partial suspension. No McGilvery soils in central part of unit as mapped. | | | |
| Wildlife | Field Review: H. Sloan, 7/15/93 | Office Review: M. Hall | |
| No concerns. Level 1 structure retention. Bear and deer sign/use. Goshawk survey conducted - no detections. One bear observed. 7/16 Murrelet survey conducted; occupancy confirmed. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit not seen from any priority travel route or use area. Unit is not visible from any priority travel routes or use areas. Maximum Modification VQO. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Upper part of unit excluded due to instability and McGilvey soils. North part of unit beyond Stream 1 is not laid out in field but was added to unit by IDT. Isolated timber between Class III streams at upper Stream 2 can serve as a leave island. Recommend Type A and Type D clearcut due to windthrow concerns. Plant large stock to help reduce salmonberry concerns. Class I stream at bottom buffered 200'. Split yard Class III streams as noted. Check feasibility of stringer bridge at Class I stream crossing. Maximize partial suspension to minimize soil disturbance using slackline. Class II stream buffers not flagged in field. Mitigation measures for this unit are as follows: F1, F5, F6, F7, F8, F10, W1, and W5. | | | |

NO UNIT MAP
UNIT DROPPED OR DEFERRED

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

| | | | |
|--|---|---|-------------------------|
| VCU #: 576 | UNIT #: 406 | QUARTER QUAD: | PHOTO YR/#: 1991/990-90 |
| ACRES: | VOL.: | LOGGING SYSTEM: Swingyarder/Running Skyline | |
| LANDSCAPE ZONE: | | | |
| Timber/Vegetation | Field Review: G. Hedin | Office Review: J. Goering | |
| Shallow soils and some exposed rock. Muskeg inclusions within the unit. Species composition consists of hemlock, spruce, and cedar. Regeneration predominantly hemlock and includes some spruce but is lacking cedar. | | | |
| Logging/Transportation | Field Review: E. Dewilde/C.Giles | Office Review: E. Urstadt, 9/13/93 | |
| Unit is accessed by Rd #70-81-25. Harvest method is swingyard with running skyline to achieve the required partial suspension. The unit size was reduced due to the cliffs to west. Economics are marginal. | | | |
| Watershed/Fisheries | Field Review: J. Metzler/S. Tanguay, 7/07/93 | Office Review: | |
| One Class III stream runs through northern end of unit - bedrock chute in upper portion and deposits of boulder/cobble on bench at bottom. Over 1/2 mile to nearest fish bearing stream. Directional fall and split yard away from channel. | | | |
| Soils/Geology | Field Review: J. Metzler, 7/07/93 | Office Review: | |
| Majority of paper plan unit location consists of bluffs and non forested chutes with very high mass movement potential. Area below 1,400' is only portion suitable for harvest. Partial suspension should be achieved to minimize disturbance to thin soils over colluvial deposits. | | | |
| Wildlife | Field Review: S. Tanguay, 7/07/93 | Office Review: M. Hall | |
| This unit requires a road through a large muskeg complex northwest of unit. Weigh road costs and wildlife habitat values with low volume timber values. Muskeg is sandhill crane muskeg area (2 adult/1 juvenile) and wildlife corridor including deer and bear. Sapsucker auditory detection. Recommend Level 1 retention of structure. | | | |
| Visual/Recreation | Field Review: | Office Review: | |
| Seen from Cutthroat Lakes in Middleground. Modification VQO. | | | |
| Cultural/Lands | Field Review: | Office Review: | |
| | | | |
| Interdisciplinary Team Recommendations | | Reviewed By: | |
| This unit is in the upper Cutthroat Lakes drainage which was removed from the regulated cut calculations base in the Honker Divide Unit Management Plan. Unit was laid out prior to discovery of this removal. | | | |

NO UNIT MAP

UNIT DROPPED OR DEFERRED

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

| | | | |
|--|-----------------------------------|---------------------------|-------------|
| VCU #: 576 | UNIT #: 407 | QUARTER QUAD: | PHOTO YR/#: |
| ACRES: | VOL.: | LOGGING SYSTEM: | |
| LANDSCAPE ZONE: | | | |
| Timber/Vegetation | Field Review: J. Case/J. Miller | Office Review: J. Goering | |
| Species composition predominantly hemlock and cedar but a few spruce are present. Regeneration predominantly hemlock but includes some spruce and a few cedar. Moderately low volume, with < 50% canopy closure & relatively low site productivity. in northwest portion. Poor soil drainage areas along with Alaska yellow-cedar decline evident. Karst topography present. | | | |
| Logging/Transportation | Field Review: | Office Review: | |
| | | | |
| Watershed/Fisheries | Field Review: J. Metzler, 6/29/93 | Office Review: | |
| Numerous debris avalanches throughout unit. Entire unit is new or revegetated debris avalanches. MMI4. Drop units. | | | |
| Soils/Geology | Field Review: J. Metzler, 6/29/93 | Office Review: | |
| Well developed Karst and a significant cave present in the southwest portion. | | | |
| Wildlife | Field Review: J. Metzler, 6/29/93 | Office Review: | |
| Sandhill crane nesting sight near northwest corner. | | | |
| Visual/Recreation | Field Review: | Office Review: | |
| | | | |
| Cultural/Lands | Field Review: | Office Review: | |
| | | | |
| Interdisciplinary Team Recommendations | | | |
| MMI4 throughout unit. Dropped. | | | |

NO UNIT MAP
UNIT DROPPED OR DEFERRED

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

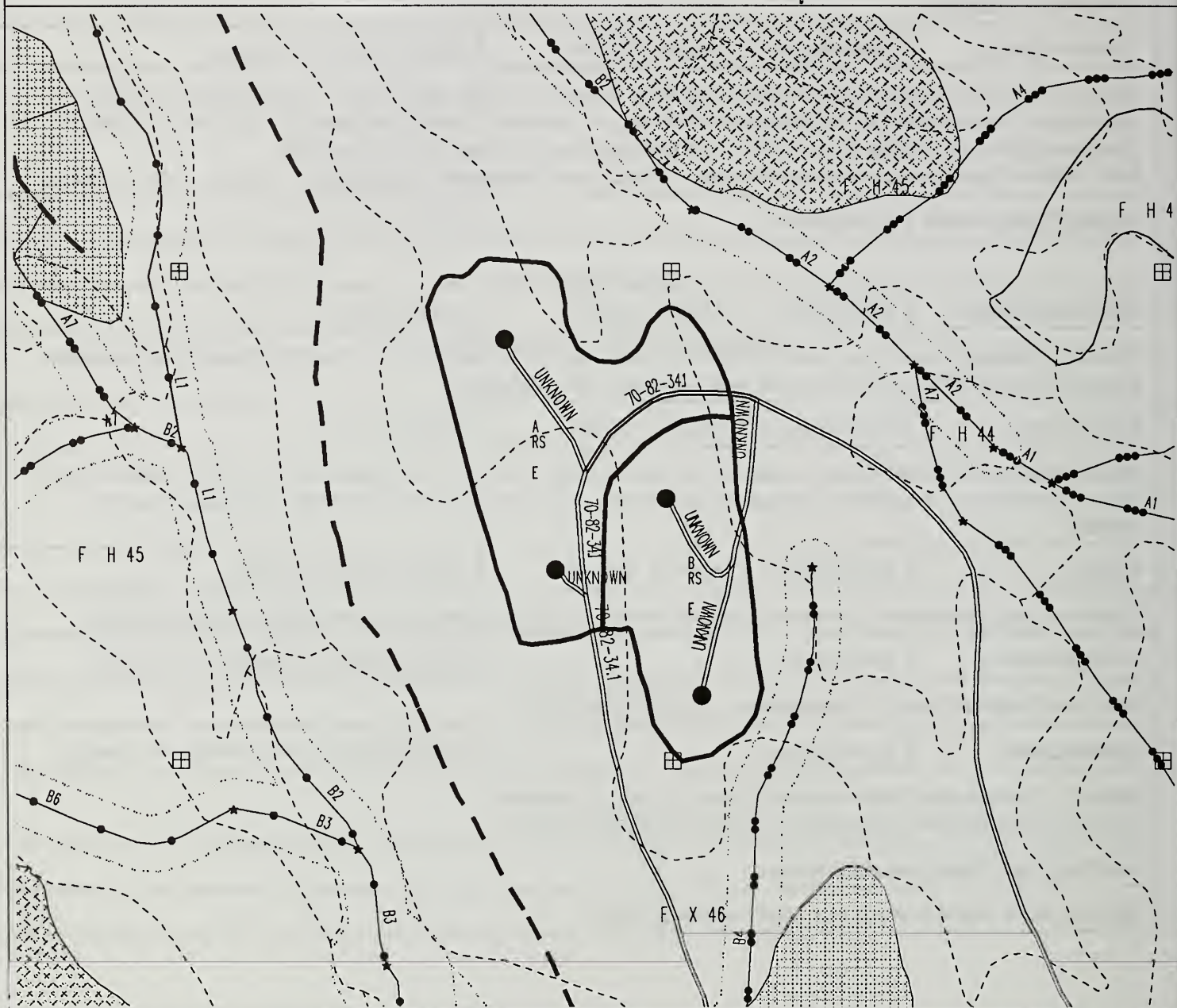
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|--|-----------------------------------|---|-------------------------|
| VCU #: 576 | UNIT #: 408 | QUARTER QUAD: C3NE | PHOTO YR/#: 1991/990-91 |
| ACRES: | VOL.: | LOGGING SYSTEM: | |
| LANDSCAPE ZONE: | | | |
| Timber/Vegetation | Field Review: B. Hasebe, 7/21/93 | Office Review: J. Goering | |
| Species composition predominantly hemlock with some spruce. Few cedar are present. Predominantly hemlock regeneration. Sparse spruce and regeneration and lacking w. redcedar. Probable salmonberry incursions with soil disturbance based on existing densities. Poor soil drainage areas on slopes and riparian areas. Rock bluffs on the higher elevations of the unit. Minimize soil disturbance through partial retention / full suspension. | | | |
| Logging/Transportation | Field Review: | Office Review: | |
| | | | |
| Watershed/Fisheries | Field Review: J. Metzler, 6/29/93 | Office Review: | |
| Class I (as mapped) stream along south boundary requires 100' no cut buffer. Two Class III tributaries in the eastern portion of the unit should be protected by split yarding or full suspension. | | | |
| Soils/Geology | Field Review: J. Metzler, 6/29/93 | Office Review: | |
| Shallow soils over colluvial slopes - attain full suspension above 1400' elevation where slopes >60%. Shallow organic soils over calluvium. Rockslides originate on cliffs above. Keep boundary below 600 feet where slopes are >75 percent. | | | |
| Wildlife | Field Review: J. Metzler, 8/13/93 | Office Review: M. Hall | |
| Conduct an eagle nest survey prior to final layout. Structure will be retained in stream buffer; Level 1 retention | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Seen from Cutthroat Lakes in Middleground. Modification VQO. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Dropped due to unstable slopes and small remaining area.. | | | |

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

VCU : 576

UNIT : 409

QUAD : D3-SW



- Revised Control Lake Project Boundary
- Post-Field Unit Boundary w/ Setting Codes
- Other Post-Field Unit Boundaries
- USFS Timber Types for Volc 4-7
- Eagle Tree Buffer of 330ft
- Existing & Rebuilt Roads
- F.S. Roads Under Construction
- Post-Field Proposed Roads
- Ahmu-Class 1 & Stream Chantypes
- Ahmu-Class 2 & Stream Chantypes
- Ahmu-Class 3 & Stream Chantypes
- Channel Type Change

- Lakes and Ponds
- Second Growth Units
- MMI 4
- McGilvery > 41
- Landings
- Stream & Lake NoCUT Buffers

August 03, 1994

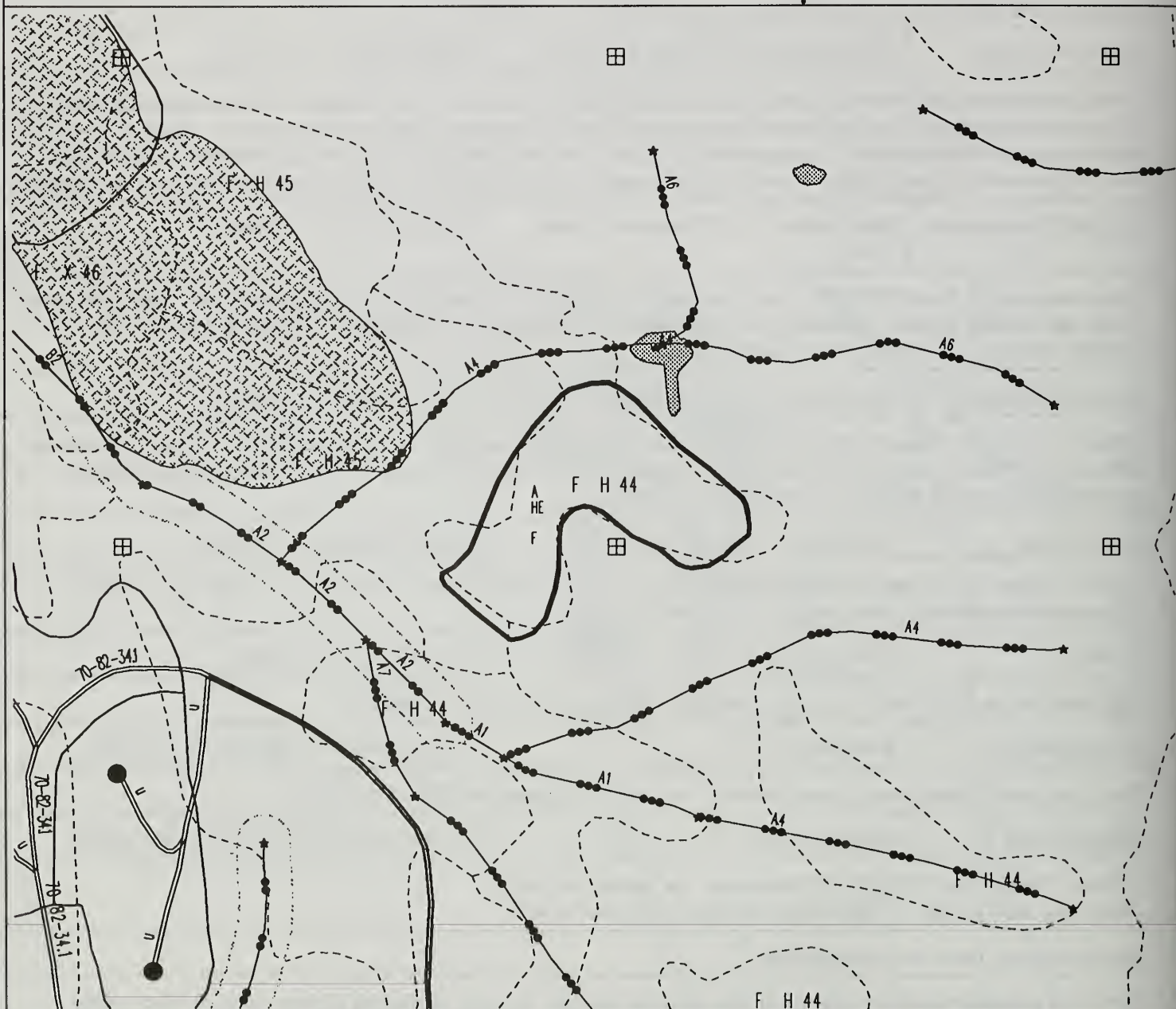
.5 MILE













CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD







| | | | |
|---|---|---|--------------------------|
| VCU #: 576 | UNIT #: 409 | QUARTER QUAD: D3SW | PHOTO YR/#: 1991/690-173 |
| ACRES: 38.3 | VOL.: 1365.0 MBF | LOGGING SYSTEM: Swingyarder/Running Skyline | |
| LANDSCAPE ZONE: Unit is within the Honker Block. | | | |
| Timber/Vegetation | Field Review: B. Hasebe, 8/13/93 | Office Review: J. Goering | |
| Species composition predominantly hemlock but includes some spruce and cedar. Regeneration predominantly hemlock but includes some spruce. Lacking cedar regeneration. Windthrow damage in the southwest corner. Some thin soil, poor soil drainage on western slope. Poor regeneration in the northwest corner due to low site productivity. Shallow soils overlying bedrock on steep slopes. Good advanced regeneration (candidate for release) consisting of spruce and hemlock. | | | |
| Logging/Transportation | Field Review: B. Wilkinson/B. Flatz, 9/5/93 | Office Review: K. Jehnke | |
| Unit is accessed by Road #70-82-34.1 and four spurs. Blowdown potential is high; do not partial cut. Yard with swing yarder and running skyline. Tailholds in a TTRA buffer will minimize soil disturbance. Partial suspension is not possible over most of the unit. Economics are good. | | | |
| Watershed/Fisheries | Field Review: H. Sloan, 7/30/93 | Office Review: T. Stewart | |
| Stream 1 is Class II; flagged O/W, requires 100' buffer that runs along south to southeast border. Its side channel also requires 100' buffer. Stream 2 is Class II; not flagged. Obvious V-notch located outside of unit boundary requires directional fall to slope break stream and is of no concern. | | | |
| Soils/Geology | Field Review: D. Crowe, 7/30/93 | Office Review: T. Stewart | |
| Old blow-down with second growth on western slope - soil seems stable now. Many bluffs with thin soils. Partial suspension recommended where possible. Suitable for harvest. | | | |
| Wildlife | Field Review: D. Crowe, 7/30/93 | Office Review: M. Hall | |
| High deer use on top of knoll - no other concerns. Retain Level 1 structure retention. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit is not visible from priority travel routes or use areas. Maximum Modification VQO. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Blowdown potential minimizes opportunity for selective harvest. In areas of running skyline, leave as many of the smaller advanced regeneration trees (Type E overstory removal) as possible. Class II streams require 100' buffer including side channel. Tail trees within the buffer will need to be used in places. Attain partial suspension where possible to minimize soil disturbance and protect advanced regeneration. Mitigation measures for this unit are as follows: F5, F8, W2, and selective harvest. | | | |

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

QUAD : D3-SW



-  Revised Control Lake Project Boundary
-  Post-Field Unit Boundary w/ Setting Codes
-  Other Post-Field Unit Boundaries
-  USFS Timber Types for Volc 4-7
-  Eagle Tree Buffer of 330ft
-  Existing & Rebuilt Roads
-  F.S. Roads Under Construction
-  Post-Field Proposed Roads
-  Ahmu-Class 1 & Stream Chantypes
-  Ahmu-Class 2 & Stream Chantypes
-  Ahmu-Class 3 & Stream Chantypes
-  Channel Type Change

-  Lakes and Ponds
 Second Growth Units
 MMI 4
 McGilvery > 41
 Landings
 Stream & Lake NoCUT Buffers

.5 MILE

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

| | | | |
|---|--|---|--------------------------|
| VCU #: 576 | UNIT #: 410 | QUARTER QUAD: D3SW | PHOTO YR/#: 1991/690-170 |
| ACRES: 13.9 | VOL.: 207.4 MBF | LOGGING SYSTEM: Helicopter | |
| LANDSCAPE ZONE: Unit is within the Honker Block. | | | |
| Timber/Vegetation | Field Review: T. Stecher, 8/27/93 | Office Review: J. Goering | |
| Species composition includes 70% hemlock, 10% spruce, and 20% cedar. Regeneration predominantly hemlock but includes a few cedar and spruce. Rock bluffs on the northern, higher elevations of the unit. May require exclusion due to harvest difficulties. Muskeg incursions incorporated with mixed species. Low volume timber in some areas. | | | |
| Logging/Transportation | Field Review: J. Doyal | Office Review: K. Jehnke | |
| Deep V-notch precludes road to this unit. Helicopter log. | | | |
| Watershed/Fisheries | Field Review: D. Crowe/R. Rogers, 7/20/93 | Office Review: T. Stewart | |
| Stream and lake north of unit are Class III - requires directional falling and split yarding; harvest only to slope break in V-notch. | | | |
| Soils/Geology | Field Review: R. Rogers, 7/20/93 | Office Review: T. Stewart | |
| Retain trees on bluffs below muskeg in central part of unit - McGilvery soils present here. | | | |
| Wildlife | Field Review: D. Crowe/R. Rogers, 7/20/93 | Office Review: M. Hall | |
| Level 1 structure retention. Retain structure between and around the four muskegs in unit for deer and bear habitat. Woodpecker auditory detections. Sandhill crane observed. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit not seen from any priority travel route or use area. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Type F seed tree cut during final layout exclude area with muskeg and McGilvery soils in southcentral portion of unit. Class III stream and lake are well outside of unit. Mitigation measures for this unit are as follows: F1, F2, and W2. | | | |

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

VCU : 576

UNIT : 411

QUAD : D3-SE



- Revised Control Lake Project Boundary
- Post-Field Unit Boundary w/ Setting Codes
- Other Post-Field Unit Boundaries
- USFS Timber Types for Volc 4-7
- Eagle Tree Buffer of 330ft
- Existing & Rebuilt Roads
- F.S. Roads Under Construction
- Post-Field Proposed Roads
- Ahmu-Class 1 & Stream Chantypes
- Ahmu-Class 2 & Stream Chantypes
- Ahmu-Class 3 & Stream Chantypes
- Channel Type Change

- Lakes and Ponds
- Second Growth Units
- MMI 4
- McGilvery > 41

- Landings
- Stream & Lake NoCUT Buffers

August 03, 1994

.5 MILE

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

| | | | |
|---|------------------------------------|---|------------------------------|
| VCU #: 576 | UNIT #: 411 | QUARTER QUAD: D3SE | PHOTO YR/#: 1991/16-1090-197 |
| ACRES: 50.5 | VOL.: 1567.6 MBF | LOGGING SYSTEM: Swingyarder/Running Skyline | |
| LANDSCAPE ZONE: Unit is within proposed Honker Block. | | | |
| Timber/Vegetation | Field Review: M. Case, 7/21/93 | Office Review: J. Goering | |
| Species composition includes hemlock, spruce, and cedar. Mixed species, lower volume in the higher elevations. Regeneration predominantly hemlock but includes some cedar and spruce. Rocky, relatively thin soils and exposed rock in northwest portion of the unit. Windthrow present in middle portion of unit. Buffer or split yard stream in middle portion of unit. | | | |
| Logging/Transportation | Field Review: | Office Review: T. Stewart | |
| A swingyarder is recommended for this unit using a running skyline system. Partial suspension is attainable on 60% to 70% of unit. 50% is uphill and 50% is downhill yarding. Swingyard to continuous road landings. Road crosses one V-notch at stable crossing. | | | |
| Watershed/Fisheries | Field Review: M. Minnillo, 7/14/93 | Office Review: T. Stewart | |
| Split yard streams 1, 2, and 4. Required 150' select harvest prescription on lower portion of stream 2 and on stream 3. | | | |
| Soils/Geology | Field Review: M. Minnillo, 7/14/93 | Office Review: T. Stewart | |
| McGilvery soils above 1,500'; excluded from unit. Partial suspension recommended throughout unit due to wet slopes. Split yard unstable V-notch through center of unit. Due to change in unit layout, upper portion of unit being deleted majority of wet slopes have been deleted. See layout note, partial suspension will be attainable in 60% - 70% of unit. | | | |
| Wildlife | Field Review: M. Minnillo, 7/14/93 | Office Review: M. Hall | |
| Exclude the southern portion of unit (below 1,300') in eastern unit to avoid harvesting through muskegs and to maintain moderate to high use deer/bear habitat (see map). Potential red-tail hawk nesting site in the lower portion of unit south of large muskeg in center of unit. Recommend structure retention Level 1. Eagle's nest located within 1,000' of unit (see overlay). | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit is not visible from priority travel routes or use areas. Maximum Modification VQO. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Upper slopes omitted from unit for McGilvery soils, wet soils, and low volume. Southern portion of unit excluded to avoid muskegs. Incorporate leave tree islands in V-notches where practical. Survey for red-tail hawk nest - if present include in leave tree island. Partial cut recommended, Type H shelterwood. Leave windfirm trees in small groups. Split yard Class III streams and 150' selective harvest on lower portion of the two Class IIb streams on south unit boundary. Partial suspension recommended to minimize soil disturbance. Mitigation measures for this unit are as follows: F4, F5, F6, F8, W2 (Type H), and W8. | | | |

NO UNIT MAP
UNIT DROPPED OR DEFERRED

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

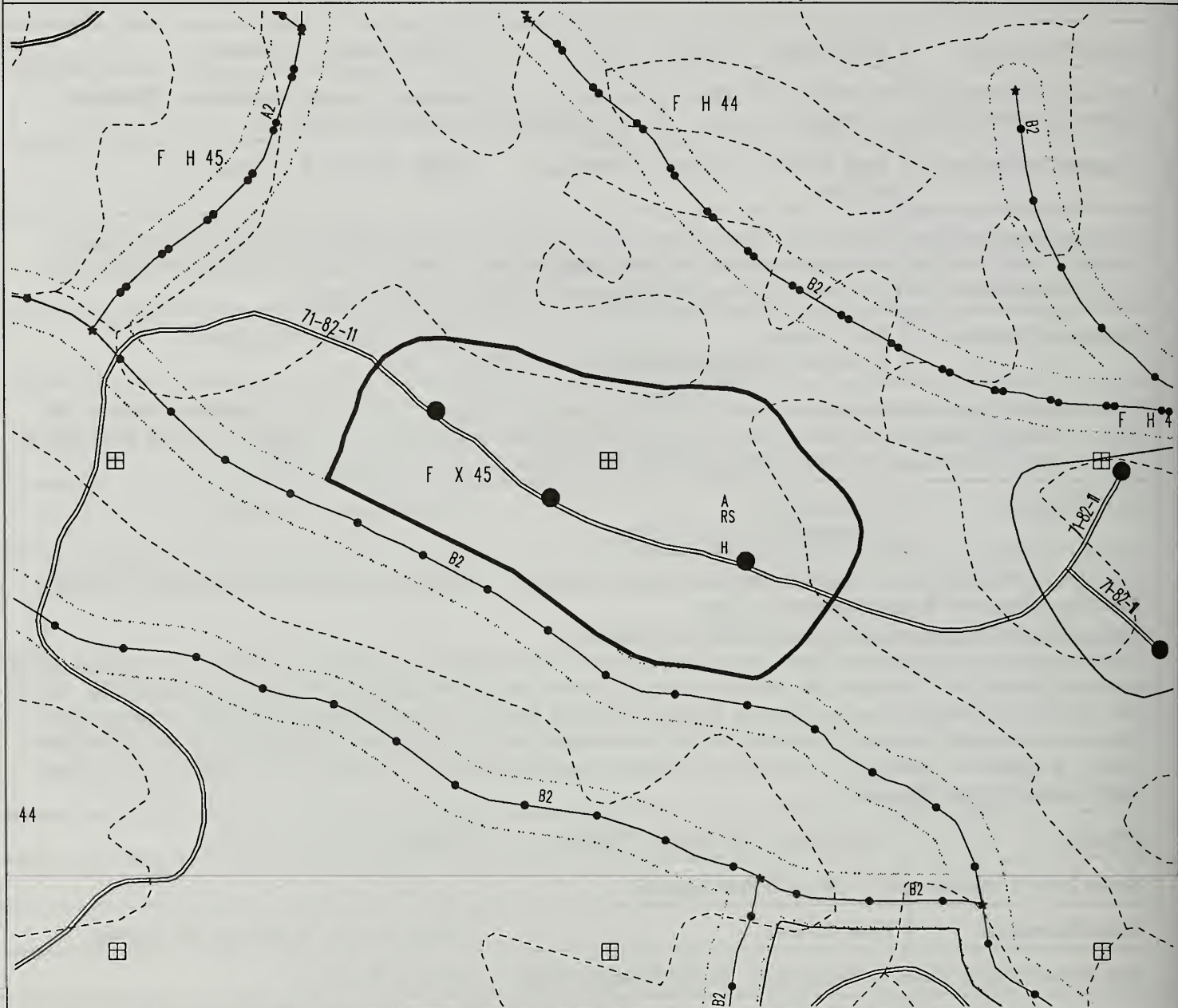
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|--|--|--------------------|---|
| VCU #: 576 | UNIT #: 412 | QUARTER QUAD: C3NE | PHOTO YR/#: 1991/690-177 |
| ACRES: | VOL.: | LOGGING SYSTEM: | |
| LANDSCAPE ZONE: | | | |
| Timber/Vegetation | Field Review: J. Miller, 8/21/93 | | Office Review: J. Goering |
| Species composition includes hemlock and cedar, lacking spruce. Predominantly hemlock regeneration. Moderate amount of mistletoe infection evident in canopy. Karst topography in the south half of the unit. | | | |
| Logging/Transportation | Field Review: T. Wetzel/J. Herzberg, 6/22/93 | | Office Review: K. Martin |
| Unit is accessed by Road #71-82-15.2. Recommend swing yarding with running skyline. Seventy percent is uphill yarding. There is a 100 foot stream buffer on the center-east boundary. Partial suspension is possible on 80% of the unit. Blowdown may be a problem. Engineers confirm karst. Economics are very good. | | | |
| Watershed/Fisheries | Field Review: J. Metzler/R. Rogers, 7/30/93 | | Office Review: T. Stewart |
| Seven streams flagged in and adjacent to unit. The lower portion of Streams 1 and 4 are Class IIb and require a 100' buffer. Stream 7, near the northeast corner, is a small muskeg channel that flows into the lake near outlet and could be Class I. The other streams should be split yarded and directional fall - none are deeply incised. | | | |
| Soils/Geology | Field Review: J. Metzler/R. Rogers, 7/30/93 | | Office Review: T. Stewart |
| No slope instability evident. Stream 3 originates from a resurgence. Sinkholes occur in the southern half of the unit. Karst topography and limestone present in unit. <u>Geology/Karst (D. Herron/R. Horrocks, 8/13/93 & 8/24/93):</u> Unit located south of Cut-throat Lake. Above copper contact of limestone unit identified in this area. A resurgence cave observed; about 110' of channel, 30' open and about 40' inaccessible. Cave contains pool that may be enterable. Expect this unit to be underlain at shallow depth by limestone although surface rock no limestone. Has karst potential beyond single cave observed. Although limestone bedrock was found in southern 1/2 of unit, no significant karst features were found. A significant resurgence cave was found outside of unit to the southwest, but won't be affected as long as unit isn't expanded in that direction. | | | |
| Wildlife | Field Review: R. Rogers, 7/30/93 | | Office Review: M. Hall |
| Retain Level 1 snag retention. Bear and deer sign/use. | | | |
| Visual/Recreation | Field Review: | | Office Review: S. Bedross, M. Greenig |
| Seen from Cutthroat Lakes in Foreground. Partial Retention VQO. Could meet Retention. | | | |
| Cultural/Lands | Field Review: | | Office Review: T.W. Greiser, M. Greenig |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Unit is within proposed medium Honker block. Unit deferred because it intercepts the upper watershed runoff of karst. Potentially significant karst in southern portion of unit. Northern 10 acres of unit is a possible helicopter opportunity, but was also deferred as a possible cable unit in future until after karst significance is more clearly identified. Mitigation measures include M2. | | | |

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

VCU : 576

UNIT : 413

QUAD : C3-NE



- Revised Control Lake Project Boundary
- Post-Field Unit Boundary w/ Setting Codes
- Other Post-Field Unit Boundaries
- USFS Timber Types for Volc 4-7
- Eagle Tree Buffer of 330ft
- Existing & Rebuilt Roads
- F.S. Roads Under Construction
- Post-Field Proposed Roads
- Ahmu-Class 1 & Stream Chantypes
- Ahmu-Class 2 & Stream Chantypes
- Ahmu-Class 3 & Stream Chantypes
- Channel Type Change

- Lakes and Ponds
- Second Growth Units
- MMI 4
- McGilvery > 41
- Landings
- Stream & Lake NoCUT Buffers

May 13, 1994

0.5 MILE

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

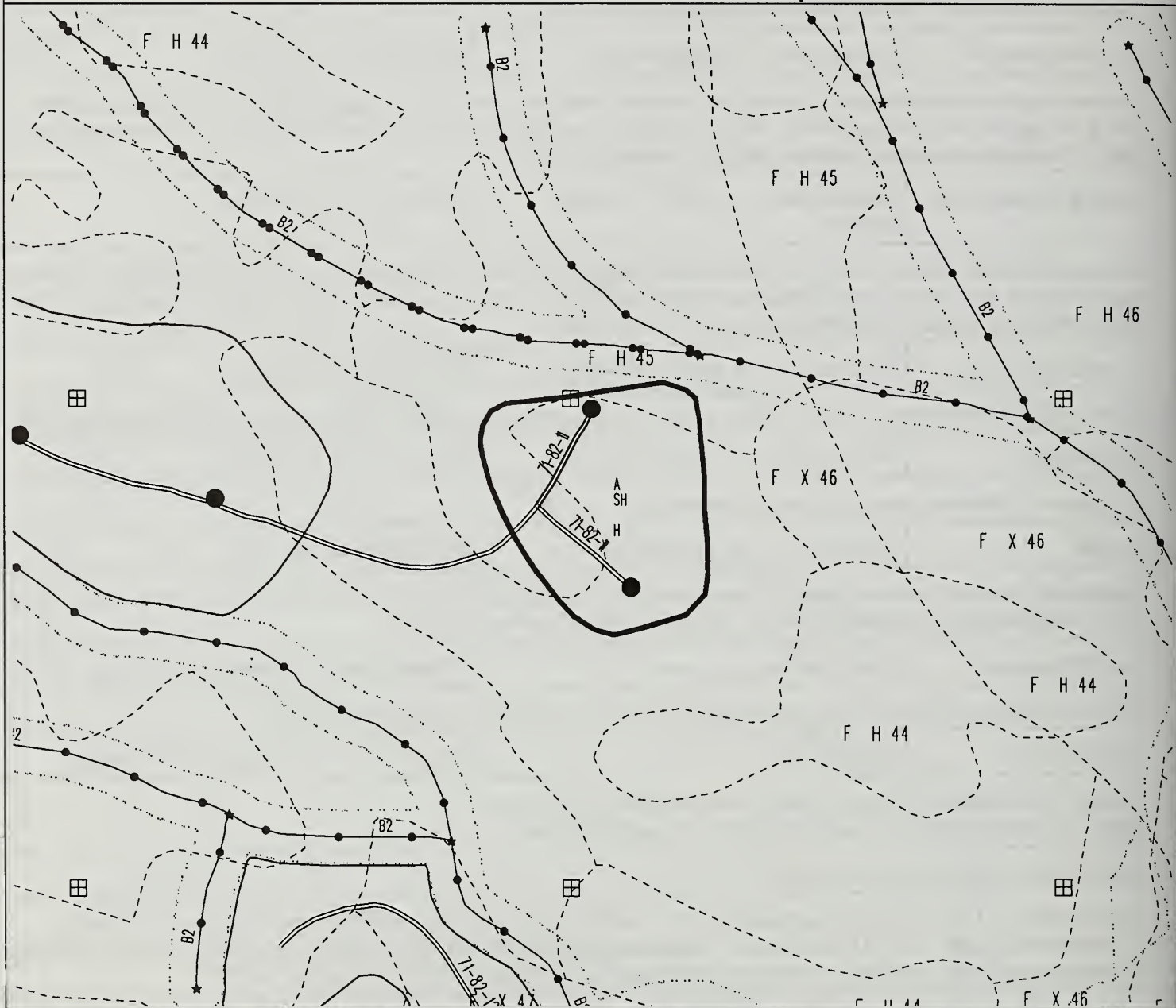
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|--|--|---|----------------------------|
| VCU #: 576 | UNIT #: 413 | QUARTER QUAD: C3NE | PHOTO YR/ #: 1991/1090-122 |
| ACRES: 42.7 | VOL.: 1004.3 MBF | LOGGING SYSTEM: Swingyarder/Running Skyline | |
| LANDSCAPE ZONE: Unit is located within the Honker Block. | | | |
| Timber/Vegetation | Field Review: J. Miller, 6/24/93 | Office Review: J. Goering | |
| Species composition predominantly hemlock but includes cedar and some spruce. Regeneration predominantly hemlock with a few spruce but is lacking cedar. Poor soil drainage throughout unit. Regeneration is sparse in the saturated areas. Light to moderate amounts of mistletoe infection evident in canopy. | | | |
| Logging/Transportation | Field Review: M. Whitty/J. Graves, 6/22/93 | Office Review: K. Martin | |
| Unit is accessed by Road #71-82-12.2. Recommend swing yarding with running skyline. Partial cut is feasible. Tailholds may be needed in a TTRA buffer to minimize soil disturbance. A 100 foot stream buffer is along south boundary. The buffer effectively isolates timber strip to south. Good economics. | | | |
| Watershed/Fisheries | Field Review: B. Romey, 6/14/93 | Office Review: T. Stewart | |
| TTRA requires 100' buffer on Class I stream (Stream 1) in south-central portion flowing along southern boundary of unit. | | | |
| Soils/Geology | Field Review: M. Minnillo, 6/14/93 | Office Review: T. Stewart | |
| No concerns. Unit has gentle slopes and good stability. | | | |
| Wildlife | Field Review: M. Minnillo, 6/14/93 | Office Review: M. Hall | |
| Recommend dropping southern portion of unit to help buffer muskeg to the south of unit or increase stream buffer 150' to 200' to maintain high use riparian corridor. Maintain Level 1 structure retention. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit is not visible from any priority travel routes or use areas. Maximum modification VQO. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Unit modified so Class I stream is outside unit - 100' buffer required which also buffers muskeg to south. Selective harvest recommended - Type H shelterwood. Retain approximately 50% of the volume as groups with minimum diameters of approximately 100'. Mitigation measures for this unit are as follows: F4, F5, F8, F10, and W2. | | | |

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

VCU : 576

UNIT : 414

QUAD : C3-NE



- Revised Control Lake Project Boundary
- Post-Field Unit Boundary w/ Setting Codes
- Other Post-Field Unit Boundaries
- USFS Timber Types for Volc 4-7
- Eagle Tree Buffer of 330ft
- Existing & Rebuilt Roads
- F.S. Roads Under Construction
- Post-Field Proposed Roads
- Ahmu-Class 1 & Stream Chantypes
- Ahmu-Class 2 & Stream Chantypes
- Ahmu-Class 3 & Stream Chantypes
- Channel Type Change

- Lakes and Ponds
- Second Growth Units
- MMI 4
- McGilvery > 41
- Landings
- Stream & Lake NoCUT Buffers

May 13, 1994

.5 MILE

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

| | | | |
|---|--|---|----------------------|
| VCU #: 576 | UNIT #: 414 | QUARTER QUAD: C3NE | PHOTO YR/#: 1090-122 |
| ACRES: 16.9 | VOL.: 310.4 MBF | LOGGING SYSTEM: Shovel Logging | |
| LANDSCAPE ZONE: Unit is located in the Honker Block. | | | |
| Timber/Vegetation | Field Review: B. Hedin, 6/23/93 | Office Review: J. Goering | |
| Species composition predominantly cedar with hemlock; little spruce is present. Regeneration predominantly hemlock but includes a few cedar and spruce. Moderately low volume, multi-canopy stand with < 50% canopy closure and relatively low site productivity. Little to no mistletoe evident in canopy. | | | |
| Logging/Transportation | Field Review: M. Whitty/J. Graves, 6/19/93 | Office Review: K. Martin | |
| Unit is accessed by Road #71-82-11. Shovel logging is recommended. Partial cut is feasible. Low blowdown potential. A 100 foot stream buffer is on the north boundary. Fair economics. | | | |
| Watershed/Fisheries | Field Review: B. Romey, 6/14/93 | Office Review: T. Stewart | |
| 100 TTRA buffer required on Class I stream (Stream 1) on north unit boundary. 10' falls on stream to north forming complete barrier. Barrier removal opportunity to increase coho rearing habitat. | | | |
| Soils/Geology | Field Review: M. Minnillo, 6/14/93 | Office Review: T. Stewart | |
| No concerns. Unit has gentle slopes and good stability. | | | |
| Wildlife | Field Review: M. Minnillo, 6/14/93 | Office Review: M. Hall | |
| Moderate deer use in unit. Structure will be maintained in riparian corridor on north side of unit, as will travel corridor with the 100' TTRA stream buffer; retention Level 1. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit is not visible from priority travel routes or use areas. Maximum Modification VQO. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Unit is located within Honker Block. 100' buffer on Class I and II stream to north of unit. 10' high falls are barrier removal opportunity to increase coho rearing habitat. Use shovel yarder to harvest trees not required for seed source or structure. Type H shelterwood. Mitigation measures for this unit are as follows: F5, F8, F11, W2, and Type H (shelterwood). | | | |

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

VCU : 576

UNIT : 415

QUAD : C3-NE



- Revised Control Lake Project Boundary
- Post-Field Unit Boundary w/ Setting Codes
- Other Post-Field Unit Boundaries
- USFS Timber Types for Volc 4-7
- Eagle Tree Buffer of 330ft
- Existing & Rebuilt Roads
- F.S. Roads Under Construction
- Post-Field Proposed Roads
- Ahmu-Class 1 & Stream Chantypes
- Ahmu-Class 2 & Stream Chantypes
- Ahmu-Class 3 & Stream Chantypes
- Channel Type Change

- Lakes and Ponds
- Second Growth Units
- MMI 4
- McGilvery > 41
- Landings
- Stream & Lake NoCUT Buffers

May 13, 1994

0.5 MILE

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

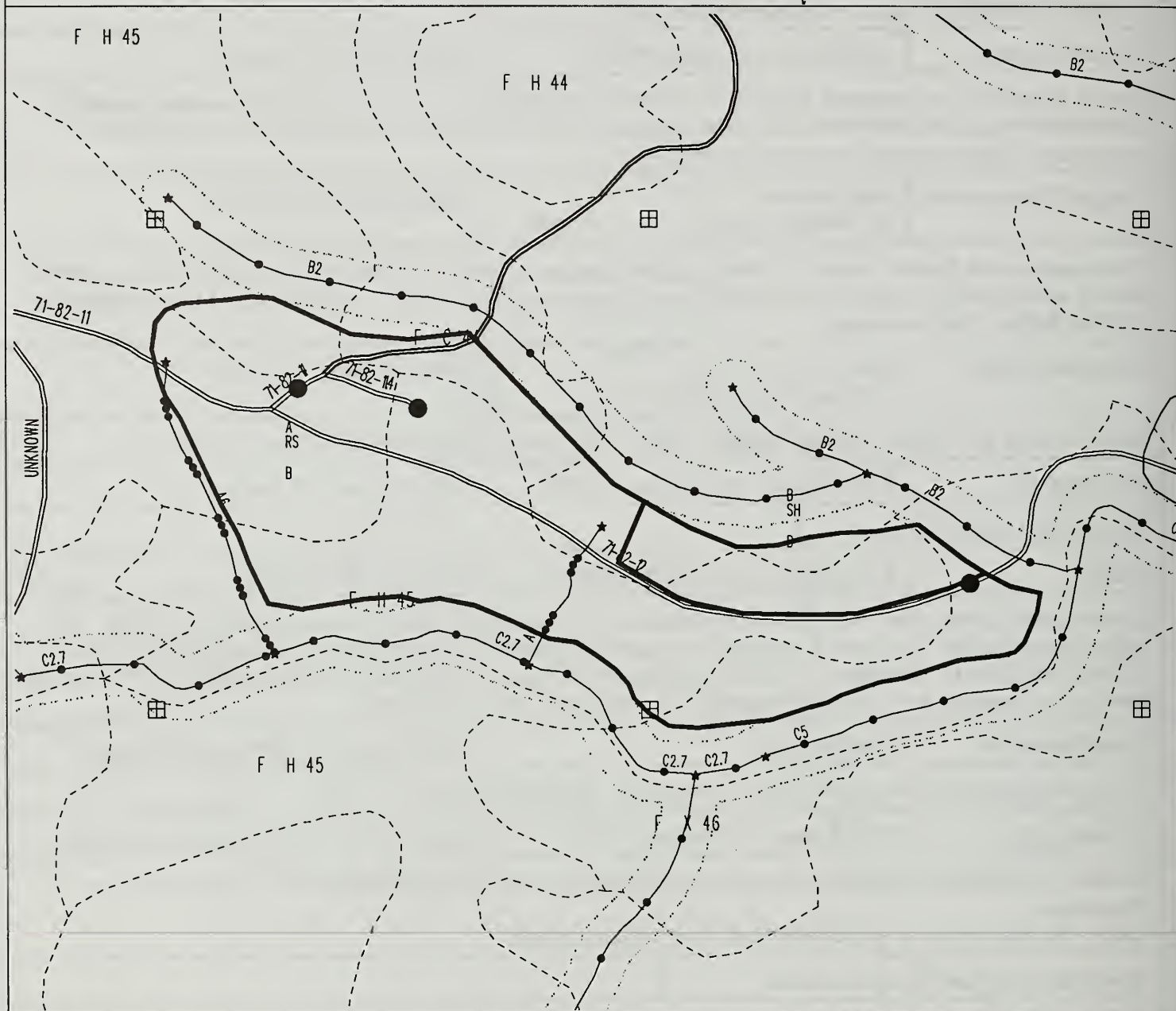
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|---|---|---|----------------------|
| VCU #: 576 | UNIT #: 415 | QUARTER QUAD: C3NE | PHOTO YR/#: 1090-122 |
| ACRES: 37.1 | VOL.: 1074.8 MBF | LOGGING SYSTEM: Running Skyline/Swingyarder, Shovel | |
| LANDSCAPE ZONE: Unit is within the Honker Block. | | | |
| Timber/Vegetation | Field Review: G. Hedin, 6/20/93 | Office Review: J. Goering | |
| Species composition predominantly hemlock but includes some spruce and cedar. Predominantly hemlock regeneration. Generally lacking spruce and western red cedar regeneration. Seed tree harvest to promote desired future species composition. Leave primarily spruce with some cedar. | | | |
| Logging/Transportation | Field Review: M. Whitty/J. Spolar/J. Graves, 6/19/93 | Office Review: K. Martin | |
| Unit is accessed by Road #71-82-12.1. Shovel log south and swing yard north sections of unit. Partial cut is possible. Several acres in the NW corner were excluded to avoid crossing a Class I stream. All but center of unit is bounded by 100 foot buffers. Fair economics. | | | |
| Watershed/Fisheries | Field Review: B. Romey/M. Minnillo 6/14/93 | Office Review: T. Stewart | |
| TTRA required 100' buffer on Class I Streams 1 and 3. TTRA required 100' buffer on Class II Stream 2. | | | |
| Soils/Geology | Field Review: M. Minnillo, 6/14/93 | Office Review: T. Stewart | |
| No concerns. Minimal slopes. | | | |
| Wildlife | Field Review: M. Minnillo, 6/14/93 | Office Review: M. Hall | |
| Potential goose nesting area. Brown creeper in southwest corner of unit. Heavy bear sign/use throughout area. Bald eagle flyover, audible. Recommend bald eagle nest survey on Cuthroat Creek from lake east along Units 576-417, 576-416, and 576-415. Recommend increasing 100' buffer on Stream 3 along southern unit boundary to 150' from slope break to help maintain high use travel corridor. Maintain Level 1 structure retention. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit is not visible from priority travel route or use areas. Maximum Modification VQO. | | | |
| Cultural/Lands | Field Review: D. Putnam, 7/29/93 | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Inventoried for cultural resources due to location in or near high probability areas for cultural resources. No concerns. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| On east and south sides extend TTRA buffer to break in slope or 100', whichever is greater, up to a maximum distance of approximately 150'. Small portion west side beyond small Class I stream - not entered at this time. Type A clearcut with structure out from TTRA buffer. Type C clearcut in shovel portion - operator choice/safety. Mitigation measures include F5, F8, F10, W3, W5, and W11. | | | |

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

VCU : 576

UNIT : 416

QUAD : C3-NE



- Revised Control Lake Project Boundary
- Post-Field Unit Boundary w/ Setting Codes
- Other Post-Field Unit Boundaries
- USFS Timber Types for Volc 4-7
- Eagle Tree Buffer of 330ft
- Existing & Rebuilt Roads
- F.S. Roads Under Construction
- Post-Field Proposed Roads
- Ahmu-Class 1 & Stream Chantypes
- Ahmu-Class 2 & Stream Chantypes
- Ahmu-Class 3 & Stream Chantypes
- Channel Type Change

- Lakes and Ponds
- Second Growth Units
- MMI 4
- McGilvery > 41
- Landings
- Stream & Lake NoCUT Buffers

May 13, 1994

.5 MILE

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

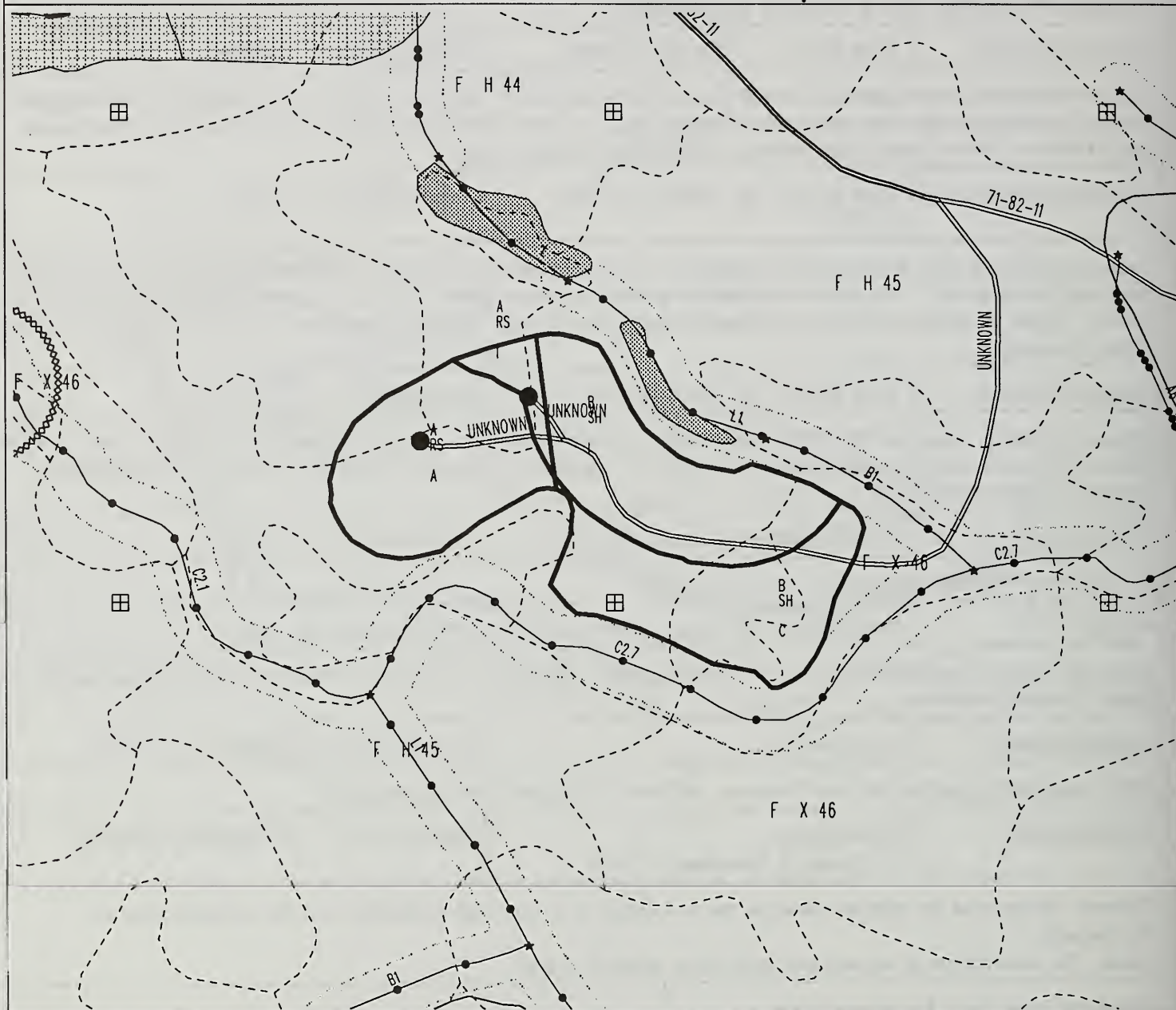
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|--|--|--|---------------------------|
| VCU #: 576 | UNIT #: 416 | QUARTER QUAD: C3NE | PHOTO YR/#: 1991/1090-122 |
| ACRES: 65.6 | VOL.: 1790.5 MBF | LOGGING SYSTEM: Swingyarder, Running Skyline, Shovel | |
| LANDSCAPE ZONE: Unit is within the Honker Block. | | | |
| Timber/Vegetation | Field Review: T. Stecher, 6/16/93 | Office Review: J. Goering | |
| Species composition predominantly hemlock but includes some spruce and cedar. Regeneration mostly on nurse logs and consists of hemlock with some spruce but is lacking cedar. Rocky, relatively thin soils. Erosive potential in the eastern half of the unit. Many small seeps, streams, and poor soil drainage areas. | | | |
| Logging/Transportation | Field Review: M. Whitty/J. Graves, 7/08/93 | Office Review: K. Martin | |
| Unit is accessed by Road #71-82-12 and a short spur. Recommend shovel logging in NE and running skyline with swing yarder in the remainder. The south is bounded by a 100 foot stream buffer. Tailholds may be needed in the TTRA buffer. Stream to north needs class determination during final layout. Buffer on Cutthroat Creek has blowdown potential. Good economics. | | | |
| Watershed/Fisheries | Field Review: H. Sloan, 6/14/93 | Office Review: T. Stewart | |
| Stream 1 (Class 1) requires 100' buffer; runs along southern border. Two Class III streams that bisect the Class I stream have no concerns. Look for opportunities to extend 100' minimum TTRA buffer, perhaps to break in slope (maximum distance of approximately 150'). | | | |
| Soils/Geology | Field Review: H. Sloan, 6/14/93 | Office Review: T. Stewart | |
| No concerns. Unit has gentle slopes and good stability. | | | |
| Wildlife | Field Review: H. Sloan, 6/14/93 | Office Review: M. Hall | |
| Bald eagle fly-over audible. Heavy bear and deer sign/use. Sapsucker foraging holes identified. Woodpecker audible. Level I structure retention. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit is not visible from priority travel route or use areas. Maximum Modification VQO. | | | |
| Cultural/Lands | Field Review: D. Putnam/S. Moorhead, 7/29/93 | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Inventoried for cultural resources due to location in or near high probability area for cultural resources. No concerns. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Type B clearcut to help provide structure out from TTRA buffer. Selective harvest to slope break in V-notch Class III stream below road in center of unit. Splyard and directional fall trees away. Mitigation measures include F5, F6, F7, F8, F10, and W4. | | | |

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

VCU : 576

UNIT : 417

QUAD : C3-NE



- | | | | |
|--|---|--|-----------------------------|
| | Revised Control Lake Project Boundary | | Lakes and Ponds |
| | Post-Field Unit Boundary w/ Setting Codes | | Second Growth Units |
| | Other Post-Field Unit Boundaries | | MMI 4 |
| | USFS Timber Types for Volc 4-7 | | McGilvery > 41 |
| | Eagle Tree Buffer of 330ft | | Landings |
| | Existing & Rebuilt Roads | | Stream & Lake NoCUT Buffers |
| | F.S. Roads Under Construction | | |
| | Post-Field Proposed Roads | | |
| | Ahmu-Class 1 & Stream Chantypes | | |
| | Ahmu-Class 2 & Stream Chantypes | | |
| | Ahmu-Class 3 & Stream Chantypes | | |
| | Channel Type Change | | |

.5 MILE

May 13, 1994

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

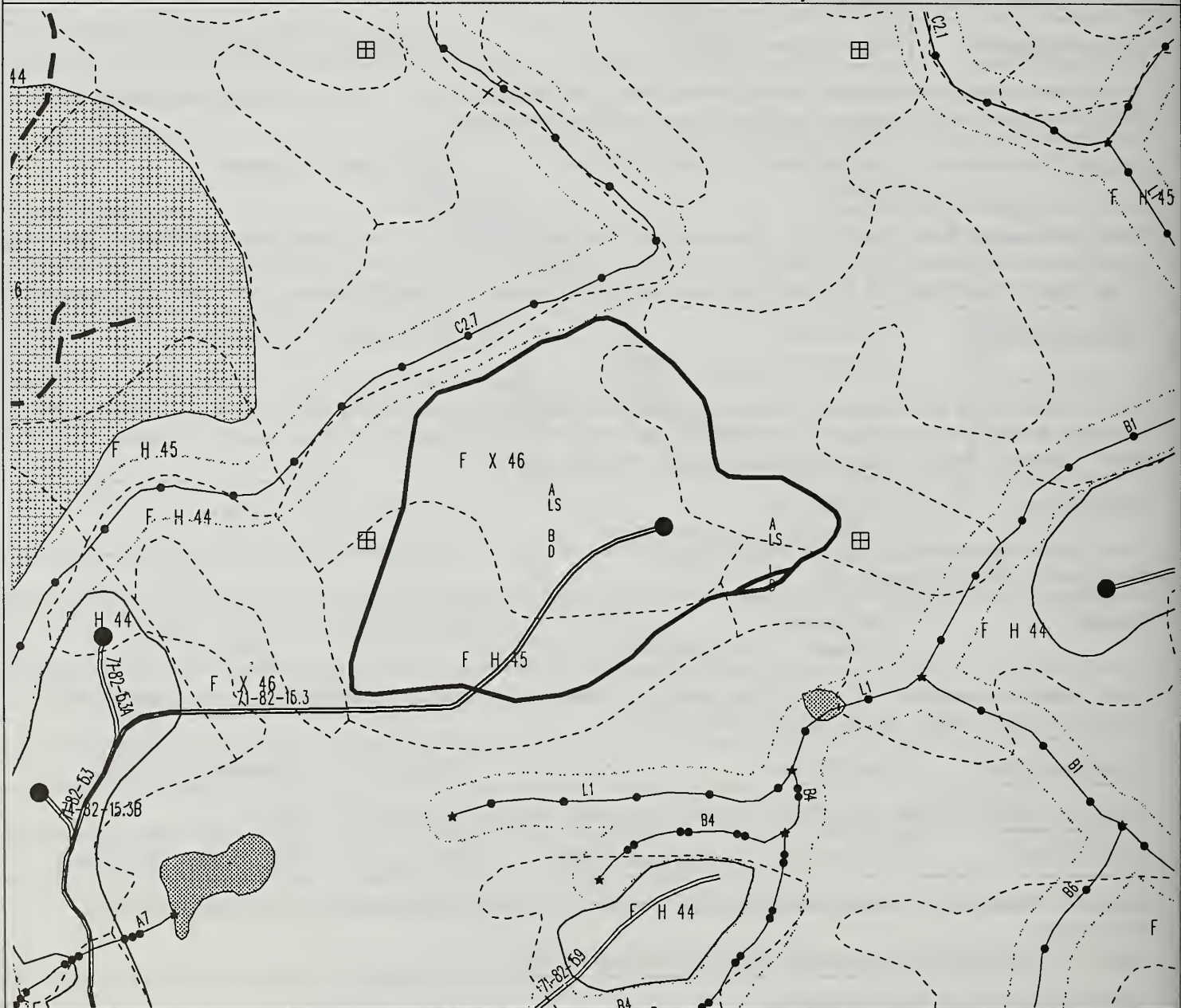
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|---|--|---|---------------------------|
| VCU #: 576 | UNIT #: 417 | QUARTER QUAD: C3NE | PHOTO YR/#: 1991/1090-122 |
| ACRES: 36 | VOL.: 550.1 MBF | LOGGING SYSTEM: Swingyarding, Running Skyline, Shovel | |
| LANDSCAPE ZONE: Unit is within the Honker Block. | | | |
| Timber/Vegetation | Field Review: 6/16/93 | Office Review: J. Goering | |
| Species composition predominantly hemlock but includes cedar and some spruce. Regeneration predominantly hemlock with a few spruce but is lacking cedar. Fairly dense understory vegetation. | | | |
| Logging/Transportation | Field Review: M. Whitty/J. Graves, 6/15/93 | Office Review: K. Martin | |
| Unit is accessed by Road #71-82-11.3. One small stub spur was not flagged. Recommend shovel yarding west and swing yarding east with running skyline. Partial cut is feasible. Tailholds are marginal and a mobile tailspar would be effective in the west portion of unit. A five acre leave area of pine and muskeg is in the SW portion of the unit. Fair economics. | | | |
| Watershed/Fisheries | Field Review: H. Sloan/C. Confer, 6/14/93 | Office Review: T. Stewart | |
| Class I stream along west, southwest, and south borders, not flagged, requires 100' buffer. Class I stream along north, northeast, and east borders, flagged B/W, requires 100' buffer. Look for opportunities to extend 100' minimum TTRA buffer, perhaps to break in slope (maximum distance of approximately 150'). | | | |
| Soils/Geology | Field Review: H. Sloan/C. Confer, 6/14/93 | Office Review: T. Stewart | |
| No concerns. Unit is generally flat. | | | |
| Wildlife | Field Review: H. Sloan/C. Confer, 6/14/93 | Office Review: M. Hall/C. Confer | |
| Level 1 structure retention. Eagle nest approximately 1/4 mile west of unit on Cutthroat Lake. Timing restrictions on blasting will apply where road is within 1/2 mile of nest. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit is not visible from any priority travel routes or use areas. Maximum Modification VQO. | | | |
| Cultural/Lands | Field Review: S. Moorhead, 7/29/93 | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Inventoried for cultural resources due to location in or near high probability area for cultural resources. No concerns. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Road is needed to west end for swing yarder setting. Type A clearcut with structure out from TTRA buffer. Type C clearcut in shovel log portion - operator choice/safety. Maintain 100' no-cut buffer along lake on northeast boundary. Type I selective harvest from 100' to 500' of lakes on north/northeast boundary. Mitigation measures for this unit are as follows: F5, F8, F10, W2, W3, W5, and W8. | | | |

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

VCU : 576

UNIT : 418

QUAD : C3-NE



- Revised Control Lake Project Boundary
- Post-Field Unit Boundary w/ Setting Codes
- Other Post-Field Unit Boundaries
- USFS Timber Types for Volc 4-7
- Eagle Tree Buffer of 330ft
- Existing & Rebuilt Roads
- F.S. Roads Under Construction
- Post-Field Proposed Roads
- Ahmu-Class 1 & Stream Chantypes
- Ahmu-Class 2 & Stream Chantypes
- Ahmu-Class 3 & Stream Chantypes
- Channel Type Change

- Lakes and Ponds
- Second Growth Units
- MMI 4
- McGilvery > 41
- Landings
- Stream & Lake NoCUT Buffers

May 13, 1994

.5 MILE

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

| | | | |
|--|---|---|---------------------------|
| VCU #: 576 | UNIT #: 418 | QUARTER QUAD: C3NE | PHOTO YR/#: 1991/1990-190 |
| ACRES: 42.6 | VOL.: 1443.7 MBF | LOGGING SYSTEM: Live Skyline | |
| LANDSCAPE ZONE: Unit is within the Honker Block. | | | |
| Timber/Vegetation | Field Review: M. Case/B. Hasebe/ J.Miller, 6/15/93 | Office Review: J. Goering | |
| Species composition predominantly hemlock but includes cedar and some spruce. Predominantly hemlock regeneration. Lacking spruce and western red cedar regeneration. Very poor spruce regeneration. Extensive stem decay evident in the large cedar. Little to no mistletoe evident in canopy. | | | |
| Logging/Transportation | Field Review: J. Doyal/S. Field, J. Estabrook, 6/10/93 | Office Review: K. Martin | |
| Unit is accessed by Road #71-82-15.3. Recommend logging with 70 foot tower using shotgun system. Tailholds along SW boundary may need tie-backs. Partial suspension is possible. Area along road can be swing yarded. A 100 foot stream buffer is at north part of unit. Partial cut is possible. Good economics. | | | |
| Watershed/Fisheries | Field Review: C. Confer/R. Rogers, 6/14/93 | Office Review: T. Stewart | |
| Maintain 100' buffers on Class I streams along north and south unit boundaries. | | | |
| Soils/Geology | Field Review: C. Confer/R. Rogers, 6/14/93 | Office Review: T. Stewart | |
| Unit has moderate slopes (35%) and good stability. No concerns. | | | |
| Wildlife | Field Review: R. Rogers, 6/14/93 | Office Review: M. Hall | |
| Wolf tracks outside unit; howling audible approximately 1/4 mile from unit. High to moderate deer use. Beaver dams below and north of unit. Red-tailed hawk audible. Retain Level 1 structure; contiguous old-growth. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit not seen from any priority travel route or use area. In modified landscape. Modification VQO. Visible from Cutthroat Lake. Would meet retention if trees were left along upslope edge. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Stream at north end should be buffered 100'. Landing would be in most visible part of unit and would require complete clearing. Leave unmerchantable trees along road to minimize visibility. Type B clearcut leaving unmerchantable trees and safe snags along boundary and some wedges between yarding corridors (Type D). One of these wedges should be used in southwest corner above road to screen road. Mitigation measures for this unit are as follows: F5, F8, F10, V2, W1 and W4. | | | |



















CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

VCU : 576

UNIT : 419

QUAD : C3-NE



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|---|---|---|-----------------------------|
|  | Revised Control Lake Project Boundary |  | Lakes and Ponds |
|  | Post-Field Unit Boundary w/ Setting Codes |  | Second Growth Units |
|  | Other Post-Field Unit Boundaries |  | MMI 4 |
|  | USFS Timber Types for Volc 4-7 |  | McGilvery > 41 |
|  | Eagle Tree Buffer of 330ft |  | Landings |
|  | Existing & Rebuilt Roads |  | Stream & Lake NoCUT Buffers |
|  | F.S. Roads Under Construction | | |
|  | Post-Field Proposed Roads | | |
|  | Ahmu-Class 1 & Stream Chantypes | | |
|  | Ahmu-Class 2 & Stream Chantypes | | |
|  | Ahmu-Class 3 & Stream Chantypes | | |
|  | Channel Type Change | | |

May 13, 1994

.5 MILE

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

| | | | |
|--|---|---|---------------------------|
| VCU #: 576 | UNIT #: 419 | QUARTER QUAD: C3NE | PHOTO YR/#: 1991/1090-194 |
| ACRES: 6.3 | VOL.: 146.6 MBF | LOGGING SYSTEM: Shovel Yarding | |
| LANDSCAPE ZONE: Unit is within Honker Block. | | | |
| Timber/Vegetation | Field Review: B. Hedin, 8/19/93 | Office Review: J. Goering | |
| Species composition predominantly hemlock with some cedar but includes few spruce. Predominantly hemlock regeneration. Sparse spruce and western red cedar regeneration. Light mistletoe evident in canopy in the north half of the unit. Poor soil drainage areas in the northern portion of the unit. | | | |
| Logging/Transportation | Field Review: M. Whitty/E. Urstadt, 8/25/93 | Office Review: K. Martin | |
| Unit is accessed by Road #71-82-15.9. Recommend shovel logging. A few slopes are >25% slope. These slopes are short and can be avoided by the shovel. This unit can also be logged with a swing yarder. Partial cut is possible. North and east sides are bounded by 100 foot stream buffer. Economics are poor. | | | |
| Watershed/Fisheries | Field Review: B. Romey, 8/01/93 | Office Review: T. Stewart | |
| Streams 1 and 2 are Class 2a, B/W, 100' TTRA buffer plus 50 foot selective harvest. | | | |
| Soils/Geology | Field Review: B. Romey, 8/01/93 | Office Review: T. Stewart | |
| Low quadrant, no unstable soils. | | | |
| Wildlife | Field Review: B. Romey, 8/01/93 | Office Review: M. Hall | |
| Fall timber away from wetlands on north and east side of unit. Sharp-shinned hawk flyover, audible. Beaver ponds on northwest side of unit. Maintain Level 1 structure retention. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit is not visible from any priority travel routes or use areas. Maximum Modification VQO - not visible from 30 road. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Buffer Class IIa streams with 100' plus a 50' selective harvest. 1/4 mile of road access is required. If available utilize a low impact forwarder to take logs out of unit. Type A clearcut. Mitigation measures for this unit are as follows: F5, F8, and W5. | | | |

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

VCU : 576

UNIT : 420

QUAD : C3-NE



- Revised Control Lake Project Boundary
- Post-Field Unit Boundary w/ Setting Codes
- Other Post-Field Unit Boundaries
- USFS Timber Types for Volc 4-7
- Eagle Tree Buffer of 330ft
- Existing & Rebuilt Roads
- F.S. Roads Under Construction
- Post-Field Proposed Roads
- Ahmu-Class 1 & Stream Chantypes
- Ahmu-Class 2 & Stream Chantypes
- Ahmu-Class 3 & Stream Chantypes
- Chonnel Type Change

- Lakes and Ponds
- Second Growth Units
- MMI 4
- Landings
- Stream & Lake NoCUT Buffers

.5 MILE

May 13, 1994

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

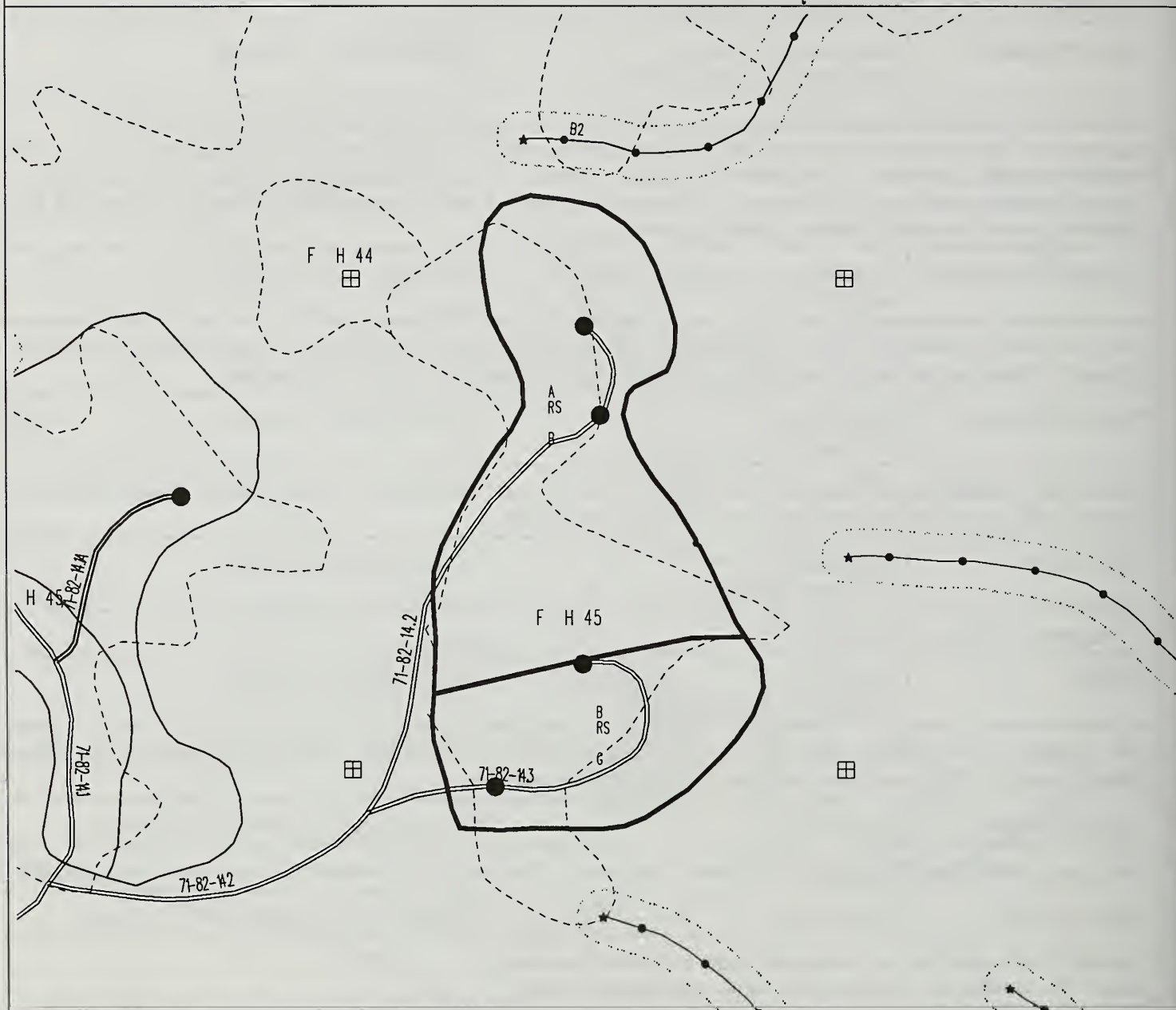
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| VCU #: 576 | UNIT #: 420 | QUARTER QUAD: C3NE | PHOTO YR/#: 1991/1090-194 |
| ACRES: 63.7 | VOL.: 1685.7 MBF | LOGGING SYSTEM: Swingyarder/Running Skyline | |
| LANDSCAPE ZONE: Unit is within the Honker Block. | | | |
| Timber/Vegetation | Field Review: 6/22/93 B. Hasebe/J. Goering/J. Boyce | Office Review: J. Goering | |
| Species composition predominantly hemlock with some cedar. Few spruce are present. Predominantly hemlock regeneration. Sparse spruce and western red cedar regeneration. Root rot pockets evident throughout area. Favor spruce for future rotation. Moderate to low amounts of mistletoe infection evident in canopy and understory. Minimize soil compaction/displacement and avoid yarding over bog/muskeg areas. Possible salmonberry and brush incursions with soil disturbance based on existing densities, although presently low. | | | |
| Logging/Transportation | Field Review: S. Field/M. Hoshall, 6/14/93 | Office Review: K. Martin | |
| Unit is accessed by Road #71-82-14.1 and one spur. The logging system is swing yard with running skyline. Partial cut is possible. One hundred foot stream buffers are on west and NW portions of unit. Fair economics. | | | |
| Watershed/Fisheries | Field Review: H. Sloan/C. Confer, 6/12/93 | Office Review: T. Stewart | |
| Three Class 1 streams (see buffer layout) all flagged B/W and require 100' buffer. A Class I lake southwest of the unit requires a 100' no-cut plus an additional 400' selective harvest buffer. | | | |
| Soils/Geology | Field Review: H. Sloan/C. Confer, 6/12/93 | Office Review: T. Stewart | |
| No concerns. Unit is relatively flat. | | | |
| Wildlife | Field Review: H. Sloan/C. Confer, 6/12/93 | Office Review: M. Hall | |
| Lake along southwest boundary and along narrow muskeg inside northwest boundary. Maintain goose habitat on southwest point of muskeg. High beaver use. Maintain Level 1 structure retention. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit is not visible from any priority travel routes or use areas. Maximum Modification VQO - not visible from 30 road. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Class I streams require 100' buffer. Lake requires 100' no-cut buffer and additional 400' Type I selective cut buffer. Within this 400' selective cut zone remove mistletoe infected canopy and understory trees. The rest of unit is Type A clearcut. Mitigation measures for this unit are as follows: F5, F8, W2 and W5. | | | |

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

VCU : 576

UNIT : 422

QUAD : C3-NE



- Revised Control Lake Project Boundary
- Post-Field Unit Boundary w/ Setting Codes
- Other Post-Field Unit Boundaries
- USFS Timber Types for Volc 4-7
- Eagle Tree Buffer of 330ft
- Existing & Rebuilt Roads
- F.S. Roads Under Construction
- Post-Field Proposed Roads
- Ahmu-Class 1 & Stream Chantypes
- Ahmu-Class 2 & Stream Chantypes
- Ahmu-Class 3 & Stream Chantypes
- Channel Type Change

- Lakes and Ponds
- Second Growth Units
- MMI 4
- McGilvery > 41
- Landings
- Stream & Lake NoCUT Buffers

May 13, 1994

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

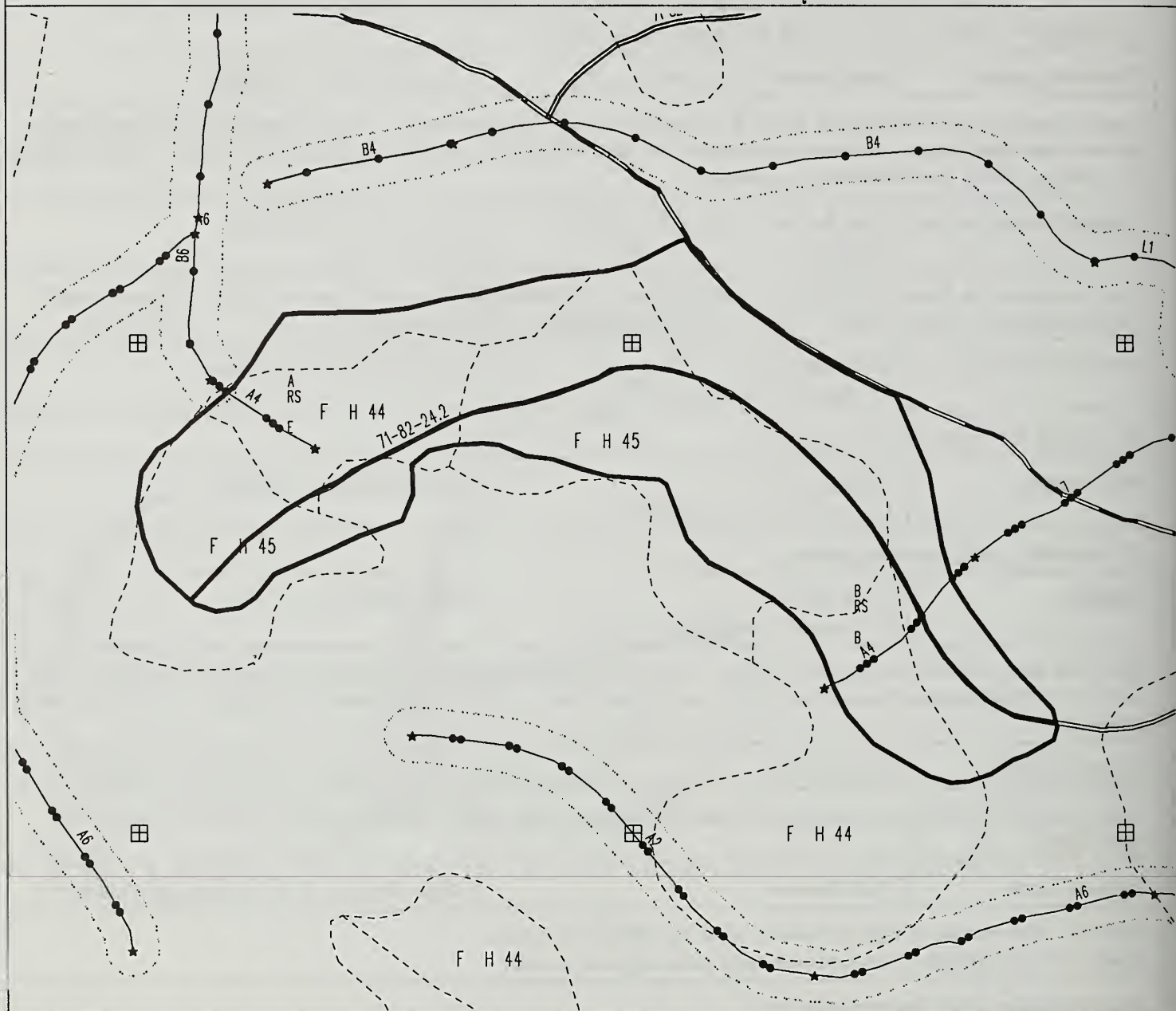
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|---|---|---|---------------------------|
| VCU #: 576 | UNIT #: 422 | QUARTER QUAD: C3NE | PHOTO YR/#: 1991/1090-123 |
| ACRES: 51.9 | VOL.: 1399.3 MBF | LOGGING SYSTEM: Swingyarder/Running Skyline | |
| LANDSCAPE ZONE: Unit is located within the Honker Block. | | | |
| Timber/Vegetation | Field Review: G. Hedin, 6/21/93 | Office Review: J. Goering | |
| Species composition predominantly hemlock but includes cedar and some spruce. Predominantly hemlock regeneration. Sparse spruce and western redcedar regeneration. Windthrow damage present in middle portion of unit. Unit is bordered by muskegs. Fairly dense understory vegetation. | | | |
| Logging/Transportation | Field Review: S. Field/B. Wilkinson, 6/18/93 | Office Review: K. Martin | |
| Unit is accessed by Road #71-82-14.2. A swing yarder with running skyline can harvest this unit. Yarding is uphill. Partial suspension is not possible. Partial cut is not recommended. Fair economics. | | | |
| Watershed/Fisheries | Field Review: C. Confer/A. Sullivan, 7/20/93 | Office Review: T. Stewart | |
| No streams in or near unit. No concerns. | | | |
| Soils/Geology | Field Review: C. Confer/A. Sullivan, 7/20/93 | Office Review: T. Stewart | |
| No instability noted. No soils concerns. | | | |
| Wildlife | Field Review: C. Confer/A. Sullivan, 7/20/93 | Office Review: M. Hall | |
| Wolf scat near middle of unit (north of knob). Active bear den near middle of unit (north of knob) downslope of wolf scat. Pair of sharpshinned hawks halfway up south side of knob. Called for goshawk - no response. Level 1 structure retention. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit is not visible from any priority travel routes or use areas. Maximum Modification VQO - Visible from 30 road, south knob. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Attempt to locate possible sharpshinned hawk nest and include tree in shelterwood leave island. Shelterwood south of south landing (Type G shelterwood). Clearcut Type B to north of south landing. Mitigation measures for this unit are as follows: F8, W2, and W4. | | | |

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

VCU : 576

UNIT : 423

QUAD : C3-NE



- Revised Control Lake Project Boundary
- Post-Field Unit Boundary w/ Setting Codes
- Other Post-Field Unit Boundaries
- USFS Timber Types for Volc 4-7
- Eagle Tree Buffer of 330ft
- Existing & Rebuilt Roads
- F.S. Roads Under Construction
- Post-Field Proposed Roads
- Ahmu-Class 1 & Stream Chantypes
- Ahmu-Class 2 & Stream Chantypes
- Ahmu-Class 3 & Stream Chantypes
- Channel Type Change

- Lakes and Ponds
- Second Growth Units
- MMI 4
- McGilvery > 41

- Landings
- Stream & Lake NoCUT Buffers

May 13, 1994

.5 MILE

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

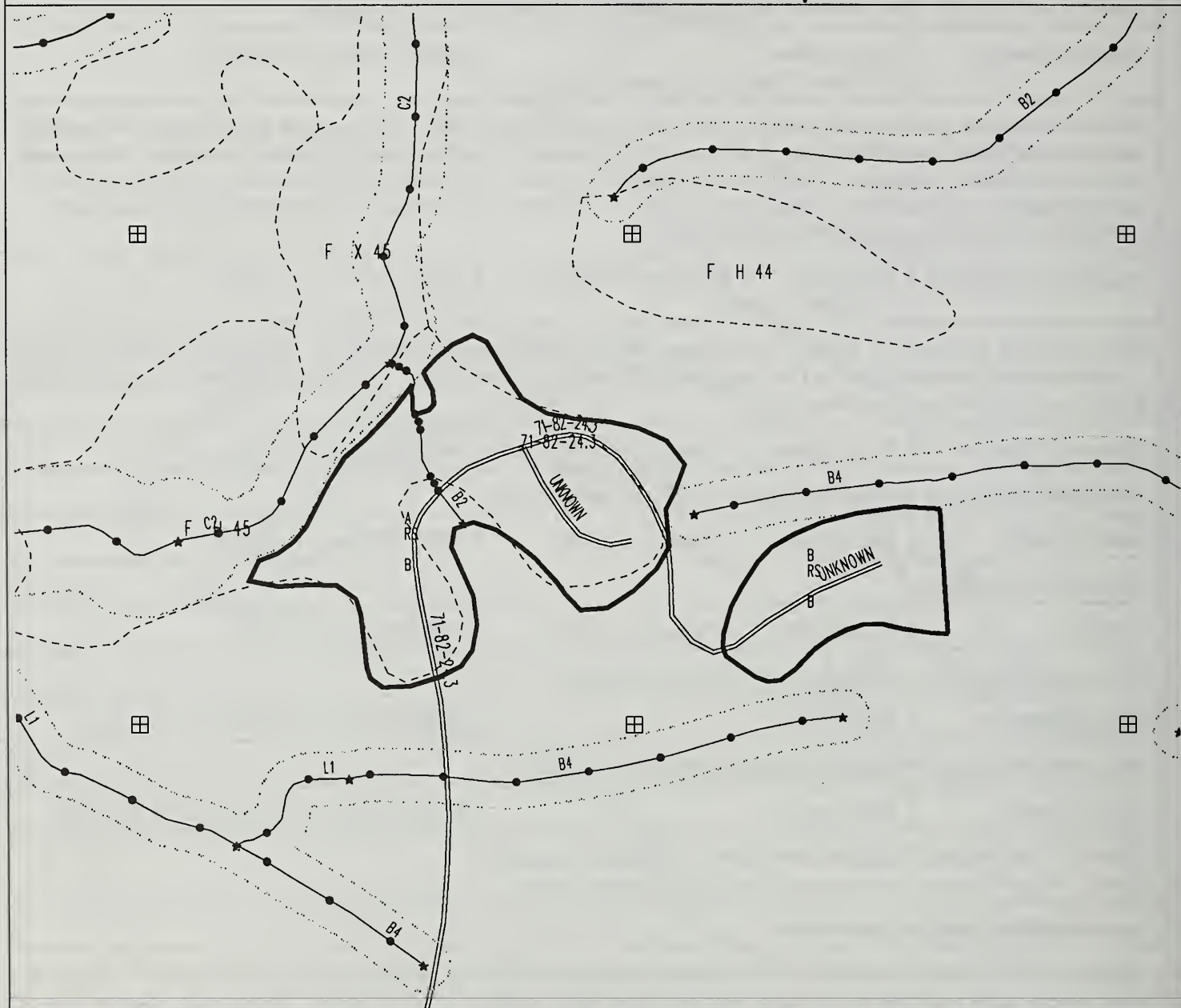
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|---|--|---|------------------------|
| VCU #: 576 | UNIT #: 423 | QUARTER QUAD: C3NE | PHOTO YR/#: 1972/72-31 |
| ACRES: 75.6 | VOL.: 1478.0 MBF | LOGGING SYSTEM: Swingyarder/Running Skyline | |
| LANDSCAPE ZONE: Unit is located within the Honker watershed and 30 road corridor. | | | |
| Timber/Vegetation | Field Review: M. Case/J. Miller/S. Karstens, 6/29/93 | Office Review: J. Goering | |
| Species composition predominantly hemlock and cedar but a few spruce exist. Regeneration predominantly hemlock but includes some spruce and a few cedar. Low to moderate amounts of mistletoe infection evident in canopy. Steep, rocky, water drainage areas within unit. Fairly dense understory vegetation. Regeneration concerns due to shallow rocky soils and the presence of salmonberry. Heavy in some areas. Moderately low volume, with < 50% canopy closure and relatively low site productivity in the southeast portion. | | | |
| Logging/Transportation | Field Review: J. Estabrook/J. Herzberg/ D. Goude, 6/28/93 | Office Review: E. Urstadt | |
| Unit is accessed by Road #71-82-24.2. Recommend swing yarding with running skyline. Fifty percent is uphill yarding. A mobile tailhold could be used on USFS Road #30 for the NE portion of unit. Partial cut is feasible between Road #71-82-24.2 and USFS #30. Fair economics. | | | |
| Watershed/Fisheries | Field Review: S. Tanguay, 6/24/93 | Office Review: T. Stewart | |
| Directional felling, split yarding on Streams 1 and 2; no buffers in unit. | | | |
| Soils/Geology | Field Review: S. Tanguay, 6/24/93 | Office Review: T. Stewart | |
| No concerns within unit. | | | |
| Wildlife | Field Review: S. Tanguay, 6/24/93 | Office Review: M. Hall | |
| No concerns within unit. Maintain Level 1 structure retention. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Seen from Road 30 in Foreground. Maximum Modification VQO. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Splityard the two Class III streams in unit. Overstory removal cutting trees greater than 16 inches (Type E). Along 30 Road remove taller trees that would reach road and cause safety problems if blown down. Above road, clearcut Type B. Below road, leave unmerchantable trees. Mitigation measures for this unit are as follows: F6, F8, W2, and W4. | | | |

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

VCU : 576

UNIT : 424

QUAD : C3-NE



- Revised Control Lake Project Boundary
- Post-Field Unit Boundary w/ Setting Codes
- Other Post-Field Unit Boundaries
- USFS Timber Types for Volc 4-7
- Eagle Tree Buffer of 330ft
- Existing & Rebuilt Roads
- F.S. Roads Under Construction
- Post-Field Proposed Roads
- Ahmu-Class 1 & Stream Chantypes
- Ahmu-Class 2 & Stream Chantypes
- Ahmu-Class 3 & Stream Chantypes
- Channel Type Change

- Lakes and Ponds
- Second Growth Units
- MMI 4
- McGilvery > 41
- Landings
- Stream & Lake NoCUT Buffers

May 13, 1994

0.5 MILE

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

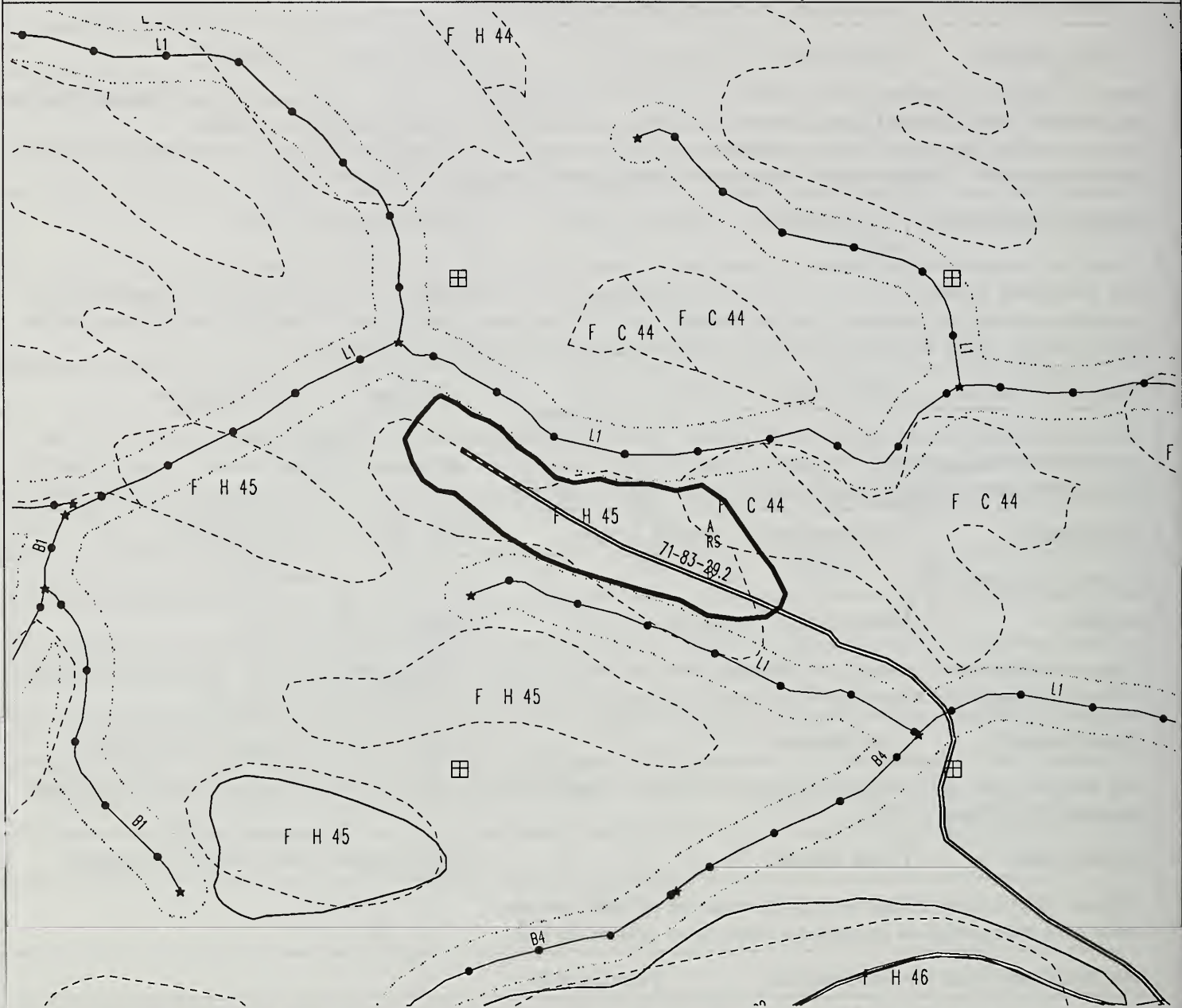
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|---|--|---|---------------------------|
| VCU #: 576 | UNIT #: 424 | QUARTER QUAD: C3NE | PHOTO YR/#: 1991/1090-124 |
| ACRES: 37.5 | VOL.: 942.7 MBF | LOGGING SYSTEM: Swingyard/Running Skyline | |
| LANDSCAPE ZONE: Unit is located within the Honker Block. | | | |
| Timber/Vegetation | Field Review: M. Case, 6/26/93 | Office Review: J. Goering | |
| Species composition predominantly hemlock and cedar but a few spruce are present. Regeneration predominantly hemlock and includes a few cedar and spruce but has generally poor occurrence. Dense understory vegetation. Moderate to high amounts of mistletoe infection evident in canopy. Low to moderate amounts of stem decay evident in hemlock and cedar. Promote spruce regeneration through partial retention or seed tree harvest. | | | |
| Logging/Transportation | Field Review: M. Whitty/J. Graves, 6/25/93 | Office Review: K. Martin | |
| Unit is accessed by Road #71-82-24.3. Use a combination of shovel and swing yarding on this unit. Partial cut is not practical on swing yard settings. The NW boundary is a 100 foot stream buffer. An IDT decision was made to add the eastern setting. Road and unit are not field verified in the eastern setting. Fair economics. | | | |
| Watershed/Fisheries | Field Review: J. Metzler, 6/22/93 | Office Review: G. McNaughton | |
| Rio Roberts Creek borders northwest side of unit - Class 1 (catch and release for steelhead) - requires 100' to 170' no harvest buffer, plus additional 100' selective harvest area in west 1/3 of unit where floodplain exists. A small Class III stream flows north through the east part of the unit - directional fall and split yard to avoid digging up the rocky banks. | | | |
| Soils/Geology | Field Review: J. Metzler, 6/22/93 | Office Review: G. McNaughton | |
| No special concerns - flat. | | | |
| Wildlife | Field Review: J. Metzler, 6/22/93 | Office Review: M. Hall | |
| High use wildlife travel corridor will be maintained with stream buffer along Rio Roberts Creek. Bear and deer sign/use evident. An eagle nest survey should be conducted prior to final layout. Level 1 structure retention. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit not seen from any priority travel route or use area. Unit is not visible from any priority travel routes or use areas. Maximum Modification VQO. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | Reviewed By: | |
| Western Lobe within unit excluded because of extended Class I buffer. Therefore extend unit to east to next patch of timber (not laid out in field). Minimal opportunity for overstory removal or shelterwood because of size class distribution and mistletoe. Type B clearcut. Maintain 100' buffer on Rio Roberts Creek northwest of unit. Class III stream in middle of unit requires a 25' selective harvest buffer. Mitigation measures for this unit are as follows: F5, F6, F8, and W4. | | | |

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

VCU : 576

UNIT : 425

QUAD : C3-NE



- Revised Control Lake Project Boundary
- Post-Field Unit Boundary w/ Setting Codes
- Other Post-Field Unit Boundaries
- USFS Timber Types for Volc 4-7
- Eagle Tree Buffer of 330ft
- Existing & Rebuilt Roads
- F.S. Roads Under Construction
- Post-Field Proposed Roads
- Ahmu-Class 1 & Stream Chantypes
- Ahmu-Class 2 & Stream Chantypes
- Ahmu-Class 3 & Stream Chantypes
- Channel Type Change

- Lakes and Ponds
- Second Growth Units
- MMI 4
- McGilvery > 41
- Landings
- Stream & Lake NoCUT Buffers

August 08, 1994

.5 MILE

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

| | | | |
|---|---|---|---------------------|
| VCU #: 576 | UNIT #: 425 | QUARTER QUAD: C3NE | PHOTO YR/#: 1090-26 |
| ACRES: 13.3 | VOL.: 393.8 MBF | LOGGING SYSTEM: Swingyard/Running Skyline | |
| LANDSCAPE ZONE: Unit is within drumlin area of Honker block. | | | |
| Timber/Vegetation | Field Review: T. Stecher, 8/16/93 | Office Review: J. Goering | |
| Species composition predominantly hemlock but includes 10% cedar. Regeneration predominantly hemlock and includes some cedar but is generally lacking spruce. Moderately low volume with < 50% canopy closure and relatively low site productivity in eastern section of unit. | | | |
| Logging/Transportation | Field Review: K. Martin, B. Flatz, 8/24/93 | Office Review: K. Martin | |
| Unit is accessed by Road #71-83-29.2. During final layout, look at feasibility of relocating road so Class I stream is crossed once. Swing yard unit using running skyline. A 100 foot stream buffer is on the NE boundary and SW boundary. Fair to poor economics. | | | |
| Watershed/Fisheries | Field Review: B. Romey, 8/04/93 | Office Review: T. Stewart | |
| Streams 1 and 2 are Class I, B/W, 100' TTRA buffer. Beaver pond to the north of unit. | | | |
| Soils/Geology | Field Review: M. Minnillo, 8/04/93 | Office Review: T. Stewart | |
| Low slopes, generally a dry site. No stability concerns. | | | |
| Wildlife | Field Review: M. Minnillo, 8/04/93 | Office Review: T. Stewart | |
| Snags will also be retained in stream buffer on north side of unit. High deer use area. Avoid disturbance of wintering trumpeter swans by avoiding all human activity within 0.5 mile of known swan wintering areas during October 15 through March 15. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit is not visible from any priority travel routes or use areas. Maximum Modification VQO. | | | |
| Cultural/Lands | Field Review: D. Putnam, 7/23/93 | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit inventoried for cultural resources due to location in or near high probability area for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Type B clearcut. Part of unit is within the second 1/4 mile of scenic river corridor. Survey scenic river boundary prior to harvest. Move road northeast so that it only crosses Class I stream once - both 36" crossings. Stream 1, north of unit - use 100' floodplain for buffer. Mitigation measures for this unit are as follows: F5, F10, W4, and W8 (eagle nest/timing - within 1/2 mile of nest). | | | |

NO UNIT MAP
UNIT DROPPED OR DEFERRED

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

| | | | |
|--|---|-----------------|---|
| VCU #: 576 | UNIT #: 426 | QUARTER QUAD: | PHOTO YR/#: 1090-124 |
| ACRES: | VOL.: | LOGGING SYSTEM: | |
| LANDSCAPE ZONE: | | | |
| Timber/Vegetation | Field Review: J. Goering, 7/8/93 | | Office Review: J. Goering |
| <p>Species composition predominantly hemlock but includes cedar and a few spruce. Regeneration predominantly hemlock with cedar but includes few spruce except in openings. Probable salmonberry incursions with soil disturbance based on existing densities. Dense understory vegetation. Promote spruce regeneration through seed tree harvest. Windfall potential minimal. Poor advanced regeneration. Appears stunted and unhealthy. Spruce regeneration appeared healthy. Minimize soil compaction/displacement and avoid yarding over bog/muskeg areas. Rocky, relatively thin soils and poor soil drainage areas. Past soil disturbance evident. South section of unit has sparse, clumped timber with little volume after streams are buffered.</p> | | | |
| Logging/Transportation | Field Review: B. Wilkinson/B. Flatz, 9/04/93 | | Office Review: E. Urstadt |
| <p>This unit has five streams requiring 100 foot buffers. Two streams are inside the unit. Virtually all of the merch timber is in the buffers. Access roads from USFS 30 are surprisingly difficult. Recommend dropping or deferring unit.</p> | | | |
| Watershed/Fisheries | Field Review: M. Minnillo, 6/22/93 | | Office Review: |
| <p>Five fish bearing streams are adjacent to the unit, including Rio Roberts Creek which bisects the unit and Newlenberry Creek which flows along the south and east boundaries. All require 100' no-harvest buffers. Near the central portion of the unit B1 channel types on Newlenberry Creek and a tributary require an additional 100' selective harvest area - see unit map for details.</p> | | | |
| Soils/Geology | Field Review: J. Minnillo, 6/22/93 | | Office Review: |
| <p>No special concerns. Avoid wet areas (forested muskeg) shown on map if shovel logging.</p> | | | |
| Wildlife | Field Review: J. Minnillo, 8/13/93 | | Office Review: M Hall |
| <p>Conduct an eagle survey prior to final layout. Retain nonmerchantable trees with "forest muskegs" included in unit. Structures will be retained in stream buffers. Level 2 structure retention due to unit location within naturally fragmented matrix.</p> | | | |
| Visual/Recreation | Field Review: | | Office Review: S. Bedross, M. Greenig |
| <p>Unit not seen from any priority travel route or use area.</p> | | | |
| Cultural/Lands | Field Review: | | Office Review: T.W. Greiser, M. Greenig |
| <p>Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit.</p> | | | |
| Interdisciplinary Team Recommendations | | Reviewed By: | |
| <p>Deferred due to low acreage of CFL.</p> | | | |

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

VCU : 576

UNIT : 427

QUAD : C3-NE



- Revised Control Lake Project Boundary
- Post-Field Unit Boundary w/ Setting Codes
- Other Post-Field Unit Boundaries
- USFS Timber Types for Volc 4-7
- Eagle Tree Buffer of 330ft
- Existing & Rebuilt Roads
- F.S. Roads Under Construction
- Post-Field Proposed Roads
- Ahmu-Class 1 & Stream Chantypes
- Ahmu-Class 2 & Stream Chantypes
- Ahmu-Class 3 & Stream Chantypes
- Channel Type Change

- Lakes and Ponds
- Second Growth Units
- MMI 4
- McGilvery > 41
- Landings
- Stream & Lake NoCUT Buffers

May 13, 1994

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

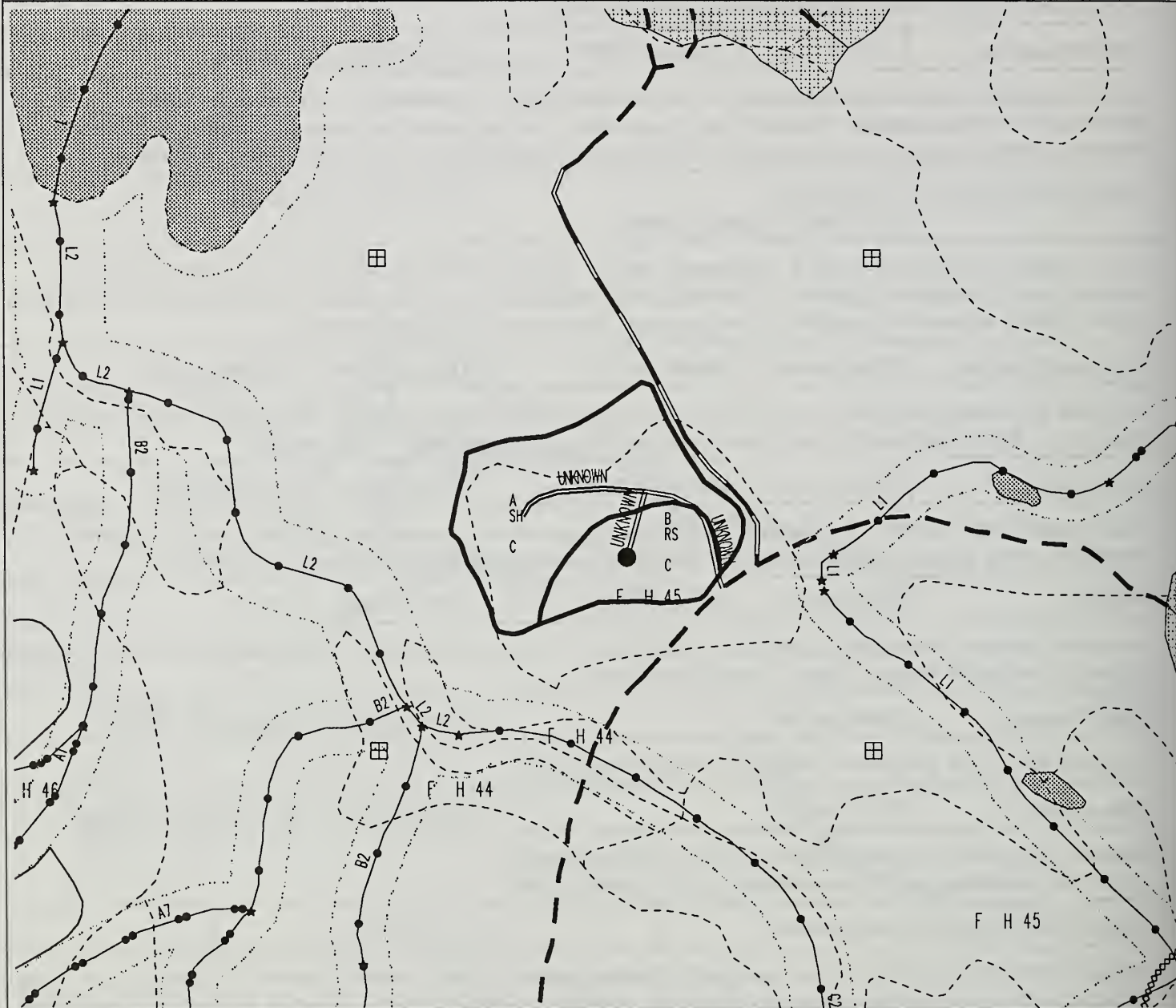
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|---|---|---|---------------------------|
| VCU #: 576 | UNIT #: 427 | QUARTER QUAD: C3NE | PHOTO YR/#: 1991/1090-124 |
| ACRES: 27.4 | VOL.: 639.9 MBF | LOGGING SYSTEM: Swingyard/Running Skyline, Shovel | |
| LANDSCAPE ZONE: Unit is located within the Honker Block. | | | |
| Timber/Vegetation | Field Review: B. Hasebe, 6/26/93 | Office Review: J. Goering | |
| Species composition predominantly hemlock but includes some cedar. Predominantly hemlock regeneration. Shallow soils overlying bedrock. Generally poor regeneration. Lacking spruce and western red cedar. Little or no mistletoe - promote regeneration and minimize soil disturbance through partial retention or shelterwood harvest. | | | |
| Logging/Transportation | Field Review: M. Whitty/J. Graves, 7/28/93 | Office Review: K. Martin | |
| Unit is accessed by Road #71-82-24.5. Recommend shovel logging on 80% and swing yard with running skyline on remaining 20%. Partial cut is possible. The swing yard landing may require an alternative tailhold such as an equipment anchor. Partial suspension is available on steeper slopes where requested. Good economics. | | | |
| Watershed/Fisheries | Field Review: J. Metzler, 6/22/93 | Office Review: G. McNaughton | |
| One Class III stream in unit (flows into a Class I below unit). Directional fall and split yard or fully suspend logs across inner gorge. Retain merchantable trees within inner gorge, approximately 50', for root strength. | | | |
| Soils/Geology | Field Review: J. Metzler, 6/22/93 | Office Review: G. McNaughton | |
| Slopes generally 30% to 40%. Small area of 60% slopes along west edge, mapped as high MMI, should get partial suspension. Inner gorge of stream shows signs of instability - see recommendations under watershed/fish. | | | |
| Wildlife | Field Review: J. Boyce, 8/14/93 | Office Review: M. Hall | |
| No special concerns. Non-merchantable buffer along V-notch will provide a corridor through the unit. Potential goshawk sighting by cruiser (B Hasebe). Level 1 structure retention. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Seen from Road 30 in Foreground. Maximum Modification VQO. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Maintain 200' buffer on Class I stream near road. Conduct goshawk survey in unit to determine if nesting occurs. Type H shelterwood harvest and leave unmerchantable trees. Split yard Class III stream, also retain merchantable trees within inner gorge for approximately 50'. Attain partial suspension in steeper area at west edge with swingyarder. Mitigation measures for this unit are as follows: F3, F5, F6, F7, F8, W2, and W9 (Goshawk survey). | | | |













CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD







VCU : 576

UNIT : 429

QUAD : C3-NE



-  Revised Control Lake Project Boundary
-  Post-Field Unit Boundary w/ Setting Codes
-  Other Post-Field Unit Boundaries
-  USFS Timber Types for Volc 4-7
-  Eagle Tree Buffer of 330ft
-  Existing & Rebuilt Roads
-  F.S. Roads Under Construction
-  Post-Field Proposed Roads
-  Ahmu-Class 1 & Stream Chantypes
-  Ahmu-Class 2 & Stream Chantypes
-  Ahmu-Class 3 & Stream Chantypes
-  Channel Type Change

-  Lakes and Ponds
 Second Growth Units
 MMI 4
 McGilvery > 41
 Landings
 Stream & Lake NoCUT Buffers

.5 MILE

May 13, 1994

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

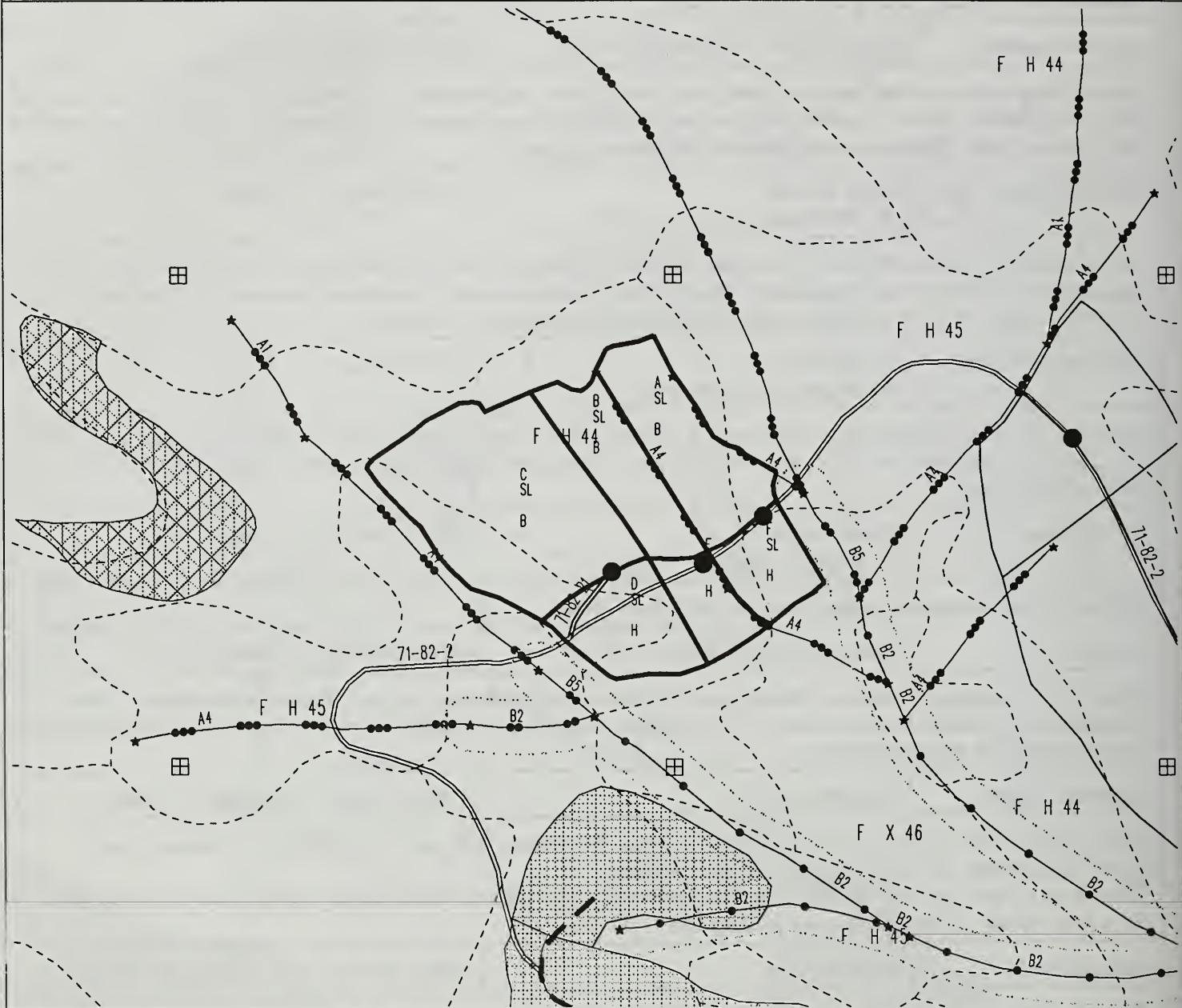
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|---|--|---|---------------------------|
| VCU #: 576 | UNIT #: 429 | QUARTER QUAD: C3NE | PHOTO YR/#: 1991/1090-194 |
| ACRES: 17.6 | VOL.: 601.2 MBF | LOGGING SYSTEM: Swingyarder/Running Skyline, Shovel | |
| LANDSCAPE ZONE: Unit is within the Honker Block. | | | |
| Timber/Vegetation | Field Review: S. Karstens, 8/14/93 | Office Review: J. Goering | |
| Species composition includes hemlock, spruce, and cedar. Regeneration predominantly hemlock and includes a few cedar but is lacking spruce. Good advanced regeneration (candidate for release) consisting of hemlock, and a few spruce and cedar. Fairly dense understory vegetation. Light to high amounts of mistletoe infection evident in canopy with some in the understory in areas. Some thin soil, poor soil drainage areas. Poor regeneration in northeast portion due to brush occurrence and poor soil drainage. | | | |
| Logging/Transportation | Field Review: E. Erstadt /M. Whitty, 8/25/93 | Office Review: K. Jehnke | |
| Shovel log except for small patches requiring swingyarder from landing 20.00 Rd 71-82-10. Partial suspension is available. | | | |
| Watershed/Fisheries | Field Review: B. Romey, 8/01/93 | Office Review: T. Stewart | |
| Stream 1 is a Class 1, flag B/W, 150' TTRA buffer. | | | |
| Soils/Geology | Field Review: B. Romey, 8/01/93 | Office Review: T. Stewart | |
| Low gradient; no soils concerns. <u>Geology/Karst (D. Herron/R. Horrocks, 8/12/93):</u> Unit traversed on foot. This unit may be located above the discontinuous limestone unit. Limestone is present but minor karst has developed. Significant karst may form down dip, but outside of the unit only minor solution features found. | | | |
| Wildlife | Field Review: B. Romey, 8/01/93 | Office Review: M. Hall | |
| High wildlife use along west side of unit (cruiser, Sydney: well worn tracks). Heavy bear and deer sign/use. Directional fall away from muskegs. Level 1 structure retention. Avoid disturbance of wintering trumpeter swans by avoiding all human activity within 0.5 mile of known swan wintering areas during October 15 through March 15. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit not seen from any priority travel route or use area. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Although karst occurs in the unit, unit is hydrologically near the bottom baseline of groundwater and is topographically and geologically isolated so no significant karst is anticipated. Silvicultural goals are to remove overstory and (especially) mistletoed overstory trees while protecting advanced regeneration. Unit will be Type C clearcut. Leave all unmerchantable trees and protect one-acre snag patch near center of unit. Mitigations for this unit include: F4, F8, and W3. | | | |

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

VCU : 576

UNIT : 432

QUAD : C3-NE



- Revised Control Lake Project Boundary
- Post-Field Unit Boundary w/ Setting Codes
- Other Post-Field Unit Boundaries
- USFS Timber Types for Volc 4-7
- Eagle Tree Buffer of 330ft
- Existing & Rebuilt Roads
- F.S. Roads Under Construction
- Post-Field Proposed Roads
- Ahmu-Class 1 & Stream Chantypes
- Ahmu-Class 2 & Stream Chantypes
- Ahmu-Class 3 & Stream Chantypes
- Channel Type Change

- Lakes and Ponds
- Second Growth Units
- MMI 4
- McGilvery > 41
- Landings
- Stream & Lake NoCUT Buffers

May 13, 1994

.5 MILE

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

| | | | |
|---|--|---|----------------------|
| VCU #: 576 | UNIT #: 432 | QUARTER QUAD: C3NE | PHOTO YR/#: 1090-196 |
| ACRES: 33.8 | VOL.: 970.0 MBF | LOGGING SYSTEM: Slackline | |
| LANDSCAPE ZONE: Unit is within Honker Block. | | | |
| Timber/Vegetation | Field Review: S. Karstens, 7/30/93 | Office Review: J. Goering | |
| Species composition predominantly hemlock and cedar but a few spruce are present. Regeneration predominantly hemlock with a few spruce but is lacking cedar. Low to moderate amounts of mistletoe infection evident in canopy. Steep relatively shallow soils, and poor soil drainage areas within unit. Salmonberry present. Rock bluffs on the higher elevations of the unit. Windthrow damage present in middle portion of unit. Many small drainages through the area. Promote spruce/cedar regeneration through seed tree harvest. | | | |
| Logging/Transportation | Field Review: B. Wilkinson/J. Graves, 8/19/93 | Office Review: K. Martin | |
| Unit is accessed by Road #71-82-2 and one short spur. Recommend 70 foot tower and slackline system. Partial cut below road to east is feasible. Partial suspension will occur on most of the unit. More profiles are needed during final layout to determine proper NW boundary. Area north of NE stream cannot be full suspended or split yarded and this boundary will have to be moved during final layout; a 100 foot stream buffer is on SW and SE corners. Good economics. | | | |
| Watershed/Fisheries | Field Review: R. Rogers/J. Metzler, 7/29/93 | Office Review: T. Stewart | |
| Streams 3, 4, and 5 were flagged orange/white, split yard, directional fall. Stream 2 was flagged orange/white, split yard, directional fall. Retain all nonmerchantable timber within 100' for Stream 2. Streams 2 and 5 were flagged blue/white, need 100' no-cut buffer, plus 50' select harvest buffer. Stream 1 needs a 100' buffer. | | | |
| Soils/Geology | Field Review: R. Rogers, 7/29/93 | Office Review: T. Stewart | |
| Achieve partial suspension above 600' elevation due to unstable, highly erodible soils. <u>Geology/Karst (D. Herron/R. Horrocks, 8/13/93):</u> Unit located below discontinuous limestone unit. Most of area covered by till; no bedrock visible. No limestone or karst features observed. | | | |
| Wildlife | Field Review: R. Rogers, 7/29/93 | Office Review: T. Stewart | |
| Moderate to high deer sign/use in unit. Level 1 structure retention. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Seen from Road 30 in Middleground. Maximum Modification VQO. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| This unit and the one to the north had been previously flagged. Final layout personnel should consult detailed file notes prior to field work to reduce potential confusion. Southwest corner of unit should maintain 100' buffer from Class I and II stream junction. Stream 5 should have 100' no-cut buffer and 50' selective harvest. Unit laid out in field to east of Stream 4 - cannot be split yarded, so final layout should be on west side of this stream. Split yard Streams 2, 3, and 4. Type H shelterwood in small groups. Remove hemlock and spruce but leave western red cedar and Alaska yellow cedar up to 19" in diameter. Achieve partial suspension above 600' elevation. Need to buck logs to approximately 16 foot plus trim to meet partial suspension above 600' elevation. Mitigation measures for this unit are as follows: F3, F5, F6, F8, W2, and W4. | | | |

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

VCU : 576

UNIT : 433

QUAD : C3-NE



- Revised Control Lake Project Boundary
- Post-Field Unit Boundary w/ Setting Codes
- Other Post-Field Unit Boundaries
- USFS Timber Types for Volc 4-7
- Eagle Tree Buffer of 330ft
- Existing & Rebuilt Roads
- F.S. Roads Under Construction
- Post-Field Proposed Roads
- Ahmu-Class 1 & Stream Chantypes
- Ahmu-Class 2 & Stream Chantypes
- Ahmu-Class 3 & Stream Chantypes
- Channel Type Change

- Lakes and Ponds
- Second Growth Units
- MMI 4
- McGilvery > 41
- Landings
- Stream & Lake NoCUT Buffers

May 13, 1994

.5 MILE

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

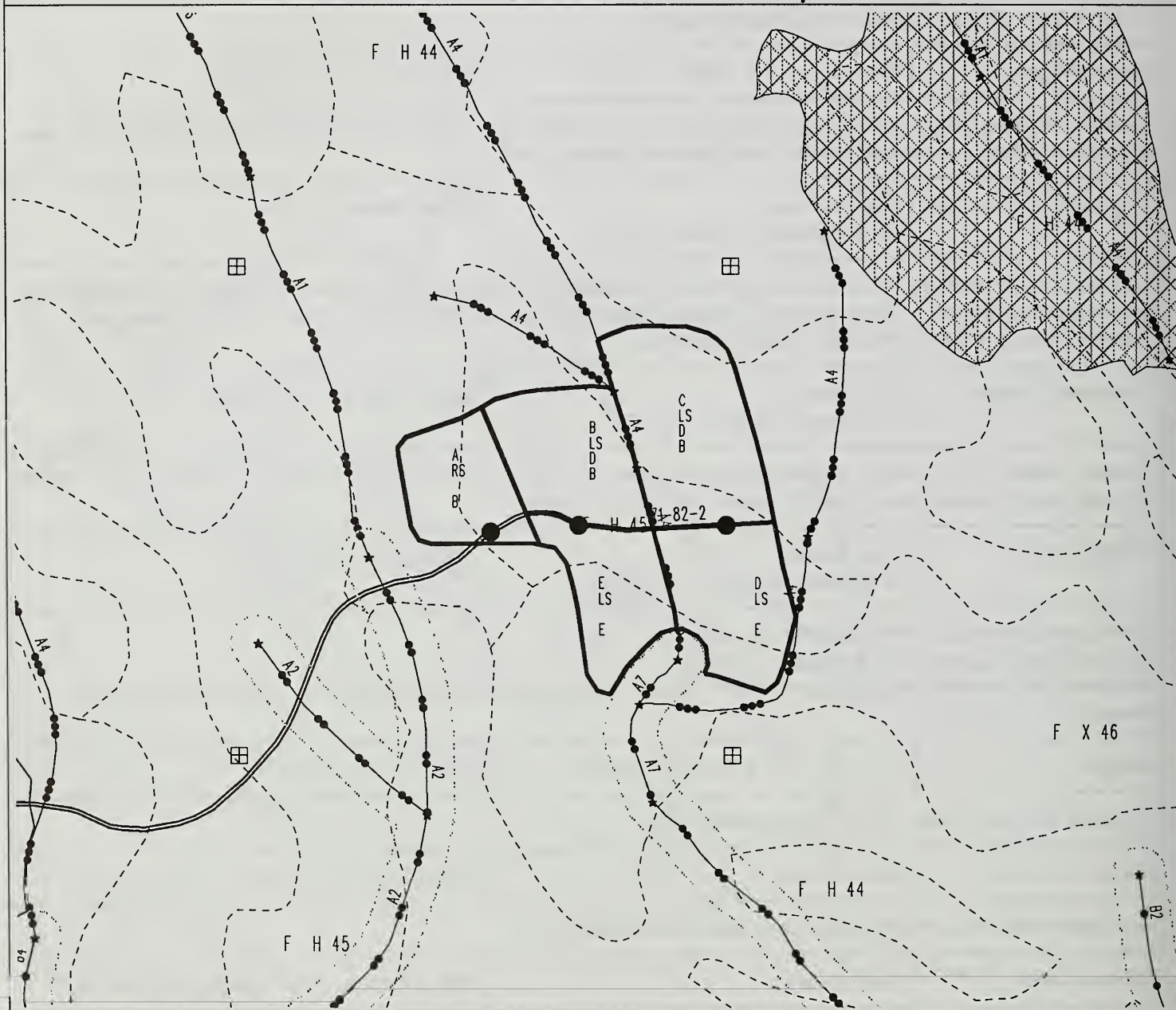
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|--|--|---|---------------------------|
| VCU #: 576 | UNIT #: 433 | QUARTER QUAD: C3NE | PHOTO YR/#: 1991/1090-196 |
| ACRES: 55.4 | VOL.: 1209.4 MBF | LOGGING SYSTEM: Slackline | |
| LANDSCAPE ZONE: Unit is within Honker Block. | | | |
| Timber/Vegetation | Field Review: J. Miller, 7/30/93 | Office Review: J. Goering | |
| Species composition includes hemlock, spruce, and cedar. Regeneration predominantly hemlock but includes a few cedar and spruce. Many small seeps, streams, and poor soil drainage areas. | | | |
| Logging/Transportation | Field Review: B. Wilkinson/J. Graves, 8/25/93 | Office Review: K. Martin | |
| Unit accessed by Road #71-82-2 and two small spurs. Recommend using a 100 foot tower which may give enough lift to make partial cut feasible. Slopes are steep; assure practicality of partial cut during final layout. Partial suspension can be achieved in at least 40% of the unit. Good economics. | | | |
| Watershed/Fisheries | Field Review: R. Rogers/J. Metzler, 7/29/93 | Office Review: T. Stewart | |
| Stream 1 requires a 100' buffer where flagged blue/white - split yard, directional fall. Stream 2 is a Class III - directional fall, split yard. Stream 3 is a Class III - directional fall, split yard. | | | |
| Soils/Geology | Field Review: R. Rogers/J. Metzler, 7/29/93 | Office Review: T. Stewart | |
| <p>Attain partial suspension where practical on unit.</p> <p><u>Geology/Karst (D. Herron/R. Horrocks, 8/13/93):</u></p> <p>Northwest half traversed on foot. Unit covered by glacial till and non-carbonate limestone. No limestone or karst observed.</p> | | | |
| Wildlife | Field Review: R. Rogers, 7/29/93 | Office Review: M. Hall | |
| Moderate deer use in unit. Level 1 structure retention. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Seen from Road 30 in Middleground. Maximum Modification VQO. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| <p>Cultural - Unit outside of high probability areas for cultural resources.</p> <p>Lands - No state/private or encumbered lands occur adjacent to unit.</p> | | | |
| Interdisciplinary Team Recommendations | | | |
| In between yarding corridors Stream 1 outside of unit to southwest requires minimum 100' buffer. Type H shelterwood in small groups in settings D, E, and F. Harvest all merchantable trees above 16" in diameter. Split yard streams on east and west unit boundary and Streams 3 and 4 within unit. Attain partial suspension where practical. Type B clearcut in settings A, B and C. Mitigation measures for this unit are as follows: F3, F5, F6, F8, W2, and W4. | | | |

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

VCU : 576

UNIT : 434

QUAD : C3-NE



- Revised Control Lake Project Boundary
- Post-Field Unit Boundary w/ Setting Codes
- Other Post-Field Unit Boundaries
- USFS Timber Types for Volc 4-7
- Eagle Tree Buffer of 330ft
- Existing & Rebuilt Roads
- F.S. Roads Under Construction
- Post-Field Proposed Roads
- Ahmu-Class 1 & Stream Chantypes
- Ahmu-Class 2 & Stream Chantypes
- Ahmu-Class 3 & Stream Chantypes
- Channel Type Change

- Lakes and Ponds
- Second Growth Units
- MMI 4
- McGilvery > 41
- Landings
- Stream & Lake NoCUT Buffers

August 03, 1994

.5 MILE

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

| | | | |
|--|--|---|---------------------------|
| VCU #: 576 | UNIT #: 434 | QUARTER QUAD: C3NE | PHOTO YR/#: 1991/1090-121 |
| ACRES: 32.6 | VOL.: 1293.8 MBF | LOGGING SYSTEM: Running Skyline/Swingyarder, TY90 with Live Skyline | |
| LANDSCAPE ZONE: Unit is the Honker Block. | | | |
| Timber/Vegetation | Field Review: T. Stecher, 8/26/93 | Office Review: J. Goering | |
| Species composition predominantly hemlock but includes cedar and some spruce. Regeneration predominantly hemlock but includes some spruce, lacking yellow cedar and western red cedar regeneration. Consider seed tree harvest to promote desired future species composition. | | | |
| Logging/Transportation | Field Review: B. Wilkinson/J. Graves, 8/26/93 | Office Review: K. Martin | |
| Unit is accessed by Road #71-82-3. Use both swing yarder with running skyline and 100 foot tower with slack line. Partial cut feasibility should be verified during final layout. One hundred foot stream buffers exist on south and NW boundaries. SW boundary has poor tailholds which may need tie-backs. Stream in center-north unit cannot be full suspended. Good economics. | | | |
| Watershed/Fisheries | Field Review: D. Crowe/R. Rogers, 7/21/93 | Office Review: T. Stewart | |
| Stream 1 is Class III - receives 25' buffer for A3 channel type plus an additional 75' no-cut buffer to protect large unstable channel (100' total no-cut buffer). Stream 2 is Class III - directional fall and split yard. Stream 3 is Class III - directional fall and split yard. Stream 4 is Class IIa - needs 100' TTRA buffer. Stream 5 is Class I - needs 100' TTRA buffer. Eastern stream IDed by engineers was outside of paper plan boundary at time of resource team visit - R. Rogers, 11/09/93. | | | |
| Soils/Geology | Field Review: D. Crowe/R. Rogers, 7/21/93 | Office Review: T. Stewart | |
| Achieve partial suspension on slopes greater than 60% to minimize mass wasting potential. | | | |
| Wildlife | Field Review: D. Crowe, 7/21/93 | Office Review: M. Hall | |
| Retain structure around muskeg for wildlife habitat. Buffer side channel off Class II stream to maintain riparian habitat. Marten - audible detection in unit. Deer bones (wolf kill) found in unit. Level 1 structure retention. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Seen from Road 30 in Middleground. Maximum Modification VQO. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Leave area at top of unit between streams as leave tree island. Leave islands approximately 100' in diameter of cedar approximately 16" in diameter and below and unmerchantable trees. Split yard or buffer other streams per fisheries directions above. Achieve partial suspension on slopes greater than 60%. Type B clearcut in settings A, B, C with Type E overstory removal below main road in settings D and E. Mitigation measures for this unit are as follows: F3, F5, F6, F8, W2 and W4. | | | |

NO UNIT MAP
UNIT DROPPED OR DEFERRED

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

| | | | |
|---|------------------------------------|---------------------------|-------------|
| VCU #: 576 | UNIT #: 435 | QUARTER QUAD: C3NE | PHOTO YR/#: |
| ACRES: | VOL.: | LOGGING SYSTEM: | |
| LANDSCAPE ZONE: | | | |
| Timber/Vegetation | Field Review: T. Stecher, 8/9/93 | Office Review: J. Goering | |
| Species composition predominantly hemlock but includes cedar and a few spruce. Regeneration predominantly hemlock but includes a few cedar and spruce. Low to moderate amounts of mistletoe infection evident in canopy. Promote cedar and spruce regeneration through partial retention or seed tree harvest. | | | |
| Logging/Transportation | Field Review: | Office Review: | |
| | | | |
| Watershed/Fisheries | Field Review: B. Rogers, 8/04/93 | Office Review: | |
| No streams in or within 100' of unit. | | | |
| Soils/Geology | Field Review: M. Minnillo, 8/04/93 | Office Review: | |
| Low slopes, generally a dry site. No stability concerns. | | | |
| Wildlife | Field Review: M. Minnillo, 8/04/93 | Office Review: M. Hall | |
| Snag retention level 1. Partial cut unit leaving trees 15" DBH in order to maintain an uneven bed stand. Three deer and one fawn observed at unit; high deer use areas for bedding. Retain Level 1 structure. | | | |
| Visual/Recreation | Field Review: | Office Review: | |
| | | | |
| Cultural/Lands | Field Review: | Office Review: | |
| | | | |
| Interdisciplinary Team Recommendations | | Reviewed By: | |
| Almost in contact with eastern boundary of proposed Rio Roberts Research Natural Area. Within the proposed medium Honker Block and the Drumlin Area. Defer unit to prevent harvest of the majority of drumlin habitat in this area; harvest of all drumlins would eliminate all medium and high quality deer winter range in this lowland. Additionally, by deferring unit future entries to this and adjacent small units will be more economical. Defered - adjacent to Rio Roberts NRA and is good wildlife habitat. | | | |

NO UNIT MAP

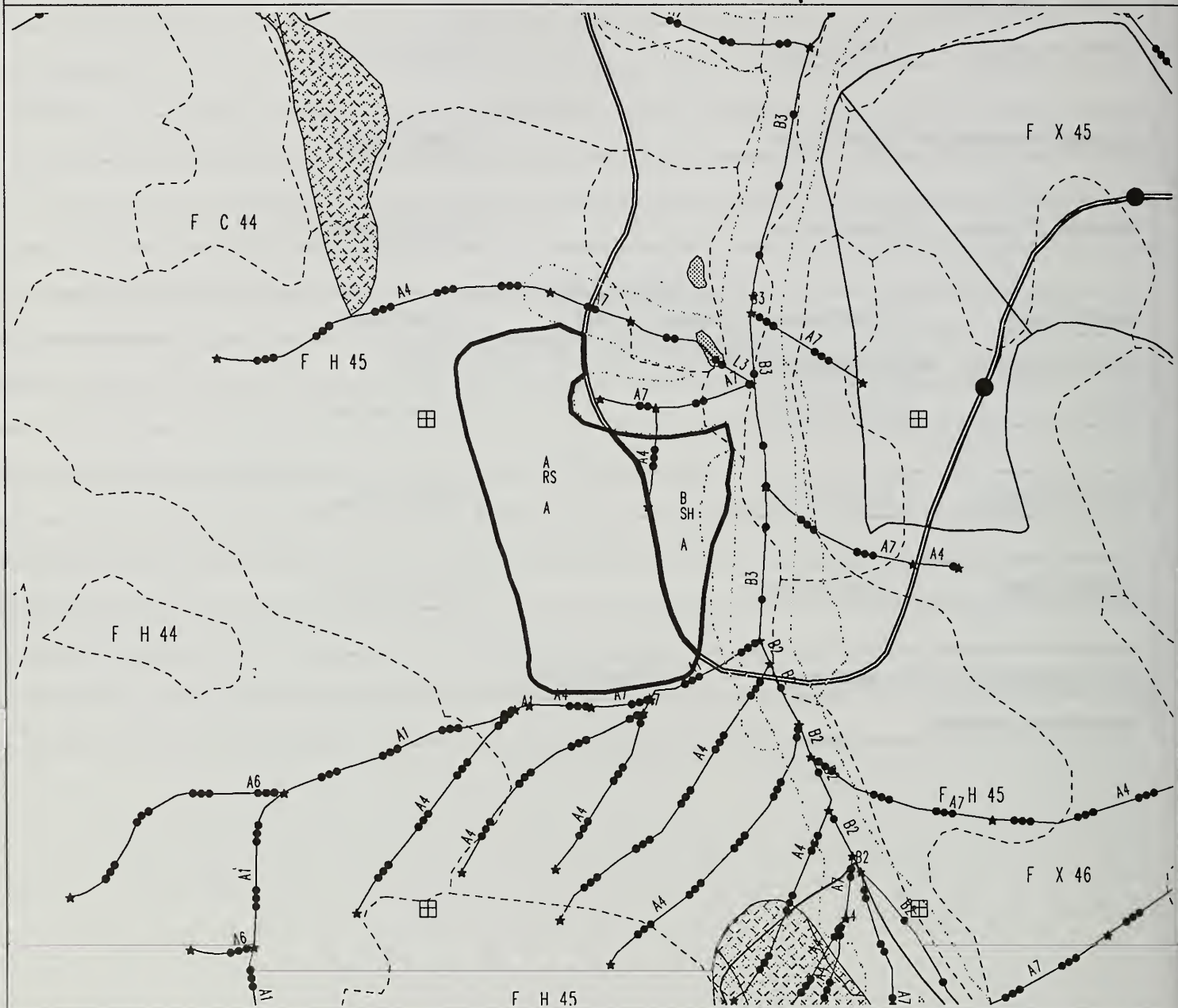
UNIT DROPPED OR DEFERRED

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

| | | | |
|--|-----------------------------------|-----------------|-------------|
| VCU #: 577 | UNIT #: 401 | QUARTER QUAD: | PHOTO YR/#: |
| ACRES: | VOL.: | LOGGING SYSTEM: | |
| LANDSCAPE ZONE: | | | |
| Timber/Vegetation | Field Review: | Office Review: | |
| | | | |
| Logging/Transportation | Field Review: | Office Review: | |
| | | | |
| Watershed/Fisheries | Field Review: | Office Review: | |
| | | | |
| Soils/Geology | Field Review: J. Metzler, 6/29/93 | Office Review: | |
| Major soil concerns. MMI4 Drop Unit. | | | |
| Wildlife | Field Review: | Office Review: | |
| | | | |
| Visual/Recreation | Field Review: | Office Review: | |
| | | | |
| Cultural/Lands | Field Review: | Office Review: | |
| | | | |
| Interdisciplinary Team Recommendations | | Reviewed By: | |
| Dropped due to MMI4. | | | |

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

QUAD : D3-SW



- | | | | |
|--|---|--|-----------------------------|
| | Revised Control Lake Project Boundary | | Lakes and Ponds |
| | Post-Field Unit Boundary w/ Setting Codes | | Second Growth Units |
| | Other Post-Field Unit Boundaries | | MMI 4 |
| | USFS Timber Types for Volc 4-7 | | McGilvery > 41 |
| | Eagle Tree Buffer of 330ft | | Landings |
| | Existing & Rebuilt Roads | | Stream & Lake NoCUT Buffers |
| | F.S. Roads Under Construction | | |
| | Post-Field Proposed Roads | | |
| | Ahmu-Class 1 & Stream Chantypes | | |
| | Ahmu-Class 2 & Stream Chantypes | | |
| | Ahmu-Class 3 & Stream Chantypes | | |
| | Channel Type Change | | |

.5 MILE

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

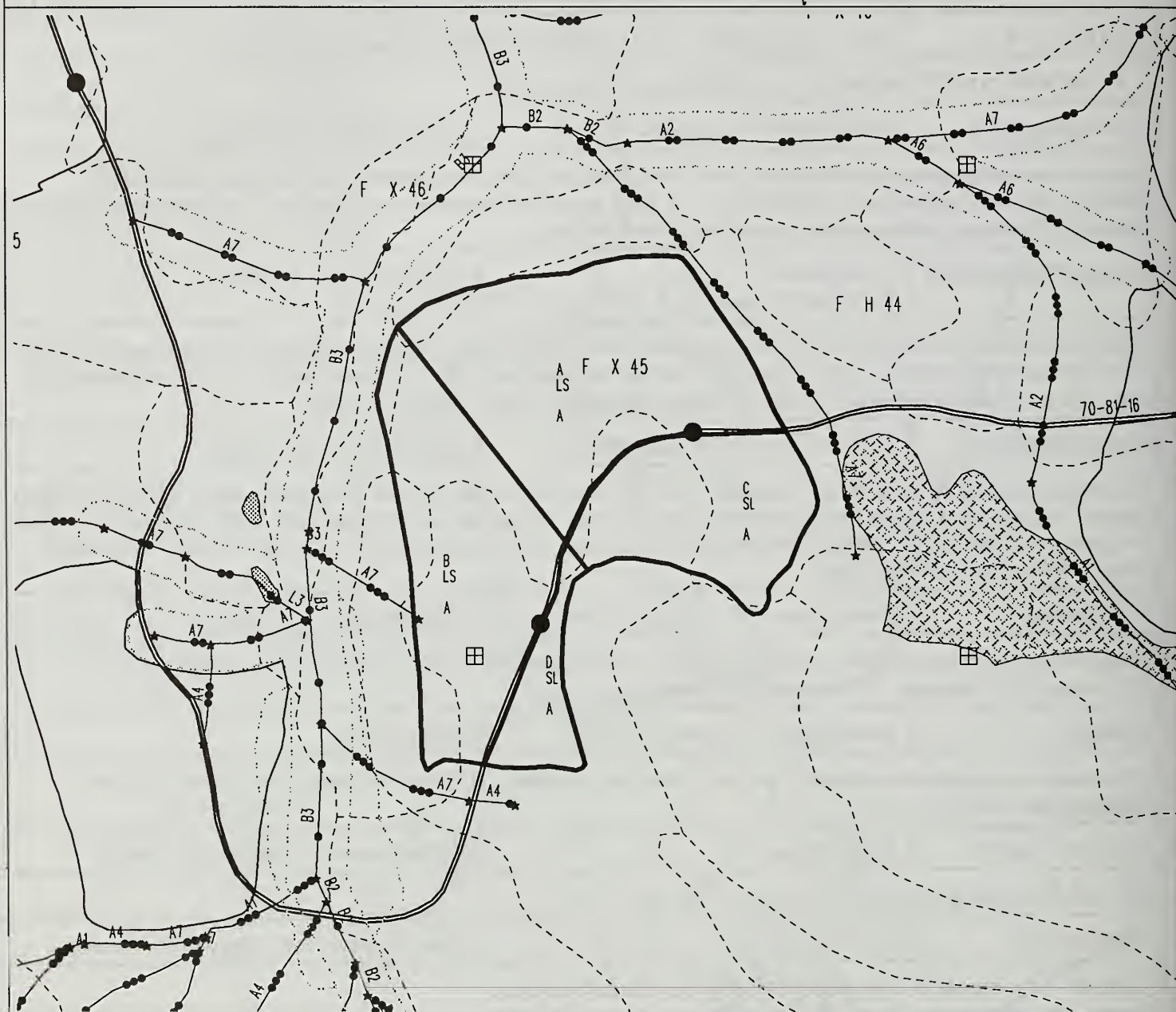
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|---|--|---|--------------------------|
| VCU #: 577 | UNIT #: 404 | QUARTER QUAD: D3SW | PHOTO YR/#: 1991/890-123 |
| ACRES: 24.9 | VOL.: 745.8 MBF | LOGGING SYSTEM: Running Skyline/Shovel | |
| LANDSCAPE ZONE: Unit is located at headwaters of Logjam Creek. | | | |
| Timber/Vegetation | Field Review: S. Karstens 7/16/93 | Office Review: J. Goering | |
| Species composition predominantly hemlock and cedar but a few spruce are present. Regeneration predominantly hemlock with some spruce but is lacking cedar. A small amount of salmonberry was present. Light mistletoe evident in canopy. Windthrow damage present in northern portion of unit. | | | |
| Logging/Transportation | Field Review: T. Wetzel/G. Slauson, 7/15/93 | Office Review: K. Martin | |
| Unit is accessed by Road #70-81-16. Swing yard and shovel log this unit. Partial suspension is possible on most of the unit. Partial cut is possible. Good economics. The east boundary is a 100 foot stream buffer. The stream on the NE edge was not found by engineers; verify its location during final layout. Good economics. | | | |
| Watershed/Fisheries | Field Review: G. Jackson, 7/12/93 | Office Review: T. Stewart | |
| The unit is bounded on three sides by streams. The northern most stream is Class II on lower slopes, Class III on upper slopes. A Class IIa stream running along the northeast corner of unit was not buffered in the field. The east side stream is Class I, requiring a 100' buffer. The south side is bounded by Class II stream that turns into V-notch on the upper slope. Harvest only to slope break. | | | |
| Soils/Geology | Field Review: G. Jackson, 7/12/93 | Office Review: T. Stewart | |
| Moderate, stable slopes on lower portions; upper 1/3 is very steep and unstable. Soils are thin, saturated and in colluvium. Exclude upper 1/3 of unit from harvest . | | | |
| Wildlife | Field Review: G. Jackson, 7/12/93 | Office Review: | |
| Two bears were observed just north of the unit. Deer use moderate. Numerous downed trees. Beaver dams on northeast side of unit. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit not seen from any priority travel route or use area. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| The upper 1/3 of unit is dropped due to McGilvery > 41% and very high MMI soils. Type A clearcut using running skyline to yard downhill to the road. Maintain partial suspension to minimize soil disturbance. Shovel yard east of the road to minimize soil disturbance, reduce salmonberry regeneration, and enable Class III stream to be split yarded. Mitigation measures for this unit are as follows: F1, F3, F4, F5, F6, F10, and W5. | | | |

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

VCU : 577

UNIT : 405

QUAD : D3-SW



- Revised Control Lake Project Boundary
- Post-Field Unit Boundary w/ Setting Codes
- Other Post-Field Unit Boundaries
- USFS Timber Types for Volc 4-7
- Eagle Tree Buffer of 330ft
- Existing & Rebuilt Roads
- F.S. Roads Under Construction
- Post-Field Proposed Roads
- Ahmu-Class 1 & Stream Chantypes
- Ahmu-Class 2 & Stream Chantypes
- Ahmu-Class 3 & Stream Chantypes
- Channel Type Change

- Lakes and Ponds
- Second Growth Units
- MMI 4
- McGilvery > 41
- Landings
- Stream & Lake NoCUT Buffers

May 13, 1994

0.5 MILE

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

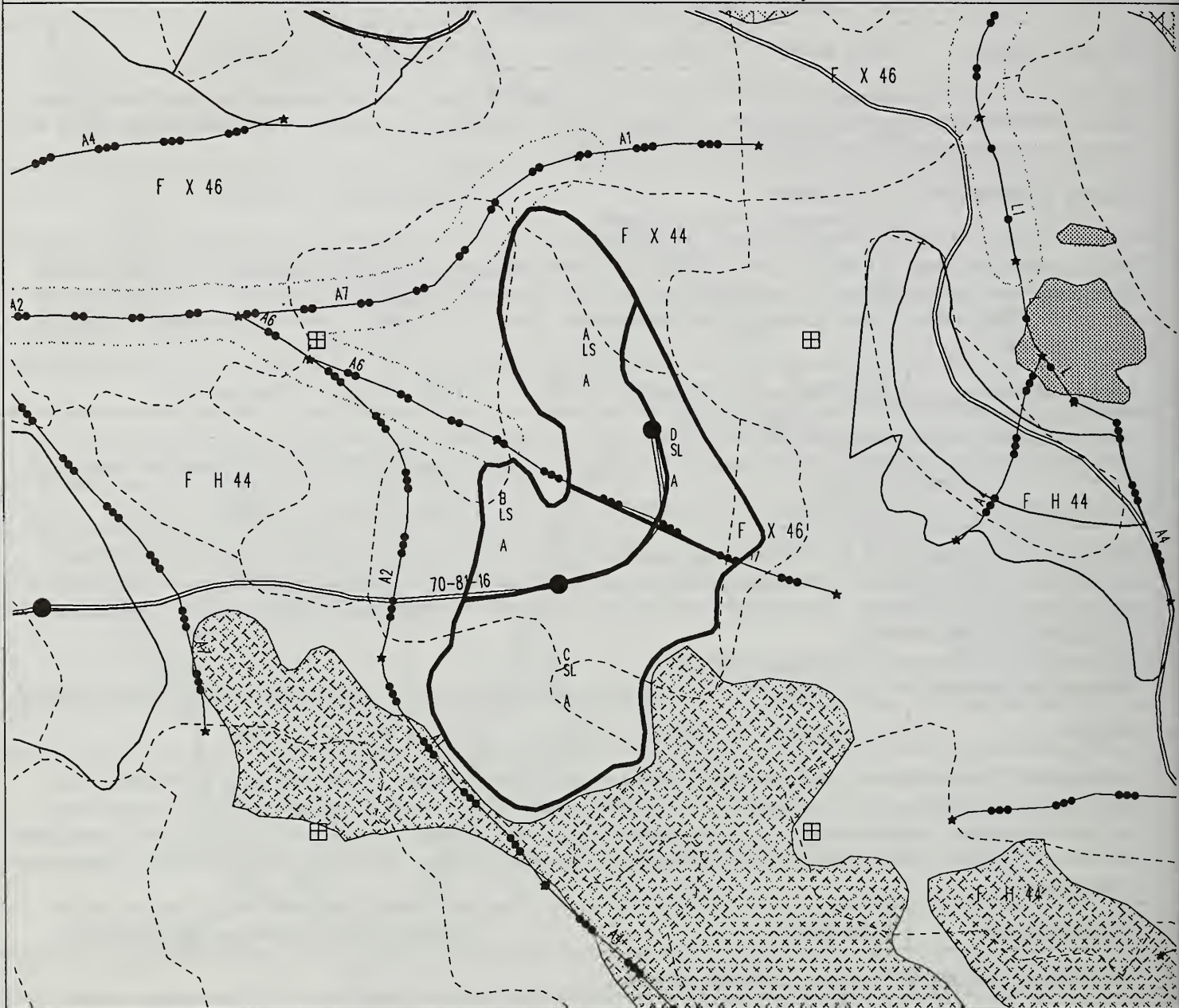
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|--|--|--|-------------------------|
| VCU #: 577 | UNIT #: 405 | QUARTER QUAD: D3SW | PHOTO YR/#: 1991/990-44 |
| ACRES: 53.9 | VOL.: 2090.0 MBF | LOGGING SYSTEM: Slackline System/Shotgun with 100' Tower | |
| LANDSCAPE ZONE: Unit is located within headwaters of Logjam Creek. | | | |
| Timber/Vegetation | Field Review: T. Stecher 7/16/93 | Office Review: J. Goering | |
| Species composition predominantly hemlock with some spruce present. Regeneration composed of dense hemlock and spruce. Favor spruce as the future crop tree. Moderate to heavy windthrow damage to the hemlock throughout the unit. Windthrow damage possibly due to root rot and shallow soils. | | | |
| Logging/Transportation | Field Review: G. Slawson/T. Wetzel, 7/16/93 | Office Review: K. Martin | |
| Unit is accessed by Road #71-81-16. Use a 100 foot tower with shotgun for uphill and highlead for downhill yarding. Partial suspension can be obtained if slack line system is used. (Partial suspension is not required). Tailholds may be required in TTRA buffer to west to minimize soil disturbance. Tie-backs for tailholds will be needed for NW portion. Good economics. | | | |
| Watershed/Fisheries | Field Review: M. Minnillo, 7/12/93 | Office Review: T. Stewart | |
| Stream originally mapped to the south of unit did not exist. An additional stream mapped as running part way into southern unit also did not exist. Stream along the eastern unit boundary flagged O/W, Class III, harvest to slope break. | | | |
| Soils/Geology | Field Review: M. Minnillo, 7/12/93 | Office Review: T. Stewart | |
| Slopes are low to moderate up to 800' elevation; slopes of 80% to 100% above 900' to top of unit. Rock bluffs at approximately 1,000' elevation. Recommend lowering unit boundary down to 1,000' elevation to below rock bluffs to prevent major soil disturbance. There are also several devils club chutes within unit, most above 900'. Yarding across these chutes may lead to slumps. <u>Geology/Karst (D. Herron/R. Horrocks, 8/18/93):</u> Northeast half traversed on foot. Non-carbonate rock exposed throughout unit. No limestone or karst features observed. | | | |
| Wildlife | Field Review: M. Minnillo, 7/12/93 | Office Review: M. Hall | |
| Southern half of unit is densely stocked hemlock/spruce with much down timber. Trails and signs are minimal here except along muskeg along west unit boundary. North half of unit is more open, large hemlock/spruce with deer beds and trails throughout. Recommend a 150' select harvest buffer along muskeg on north and west side of unit leaving trees less than 15" DBH in order to maintain high hiding/forage use along muskeg. Contiguous old-growth tract. Retain level 1 and structure. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit not seen from any priority travel route or use area. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Type A clearcut. Minimal trees in lower size classes so no selective harvest on north and west sides of unit. Directionally fall trees away from all Class III streams. Partial suspension required in steepest portions of unit. Mitigation measures for this unit are as follows: F1, F3, F4, F5, F6, and W5. | | | |

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

VCU : 577

UNIT : 406

QUAD : D3-SW



- Revised Control Lake Project Boundary
- Post-Field Unit Boundary w/ Setting Codes
- Other Post-Field Unit Boundaries
- USFS Timber Types for Volc 4-7
- Eagle Tree Buffer of 330ft
- Existing & Rebuilt Roads
- F.S. Roads Under Construction
- Post-Field Proposed Roads
- Ahmu-Class 1 & Stream Chantypes
- Ahmu-Class 2 & Stream Chantypes
- Ahmu-Class 3 & Stream Chantypes
- Channel Type Change

- Lakes and Ponds
- Second Growth Units
- MMI 4
- McGilvery > 41
- Landings
- Stream & Lake NoCUT Buffers

May 13, 1994

0.5 MILE

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

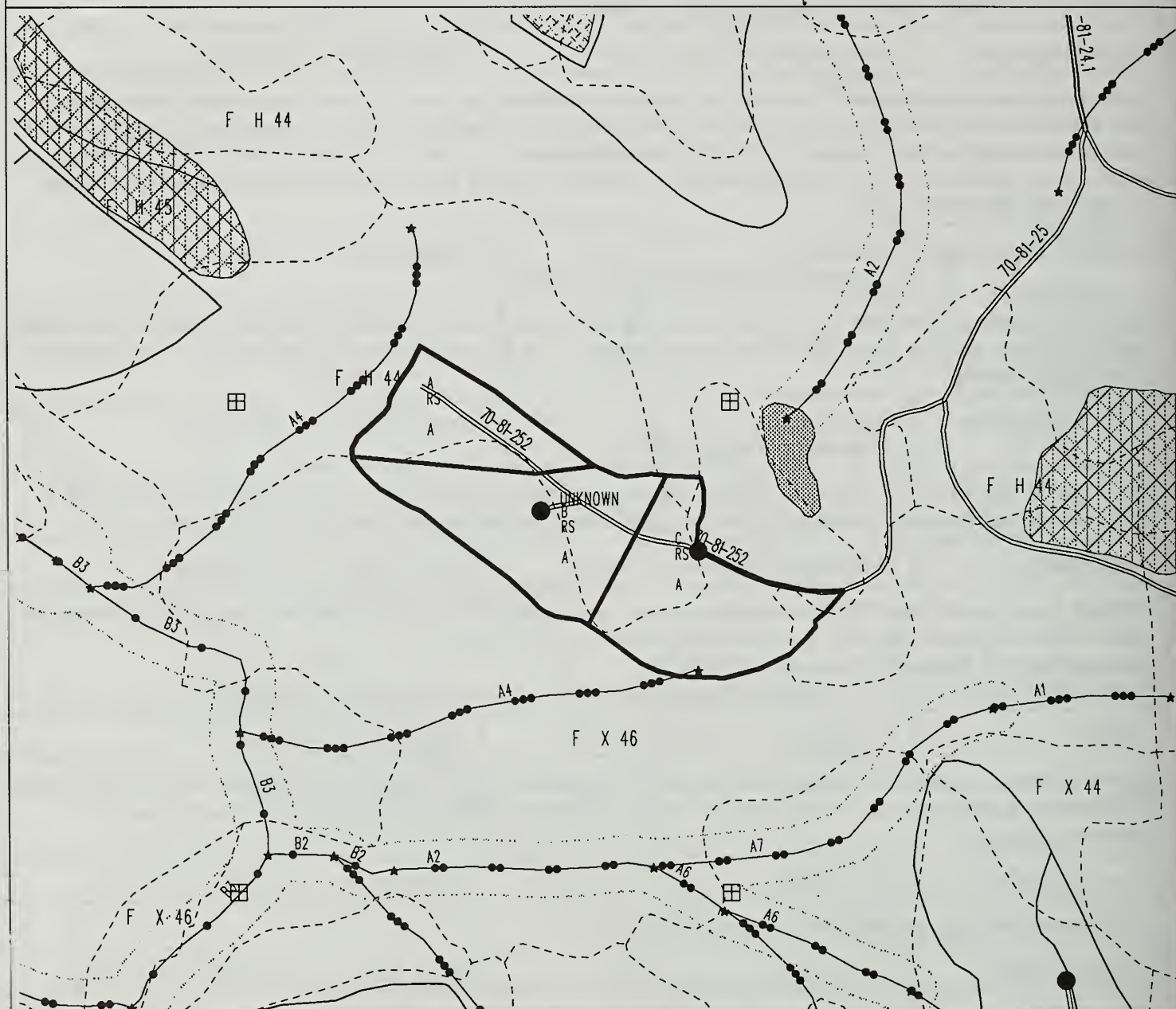
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|---|---|--|-------------------------|
| VCU #: 577 | UNIT #: 406 | QUARTER QUAD: D3SW | PHOTO YR/#: 1991/990-43 |
| ACRES: 40.8 | VOL.: 928.4 MBF | LOGGING SYSTEM: Slackline with 70-100' Tower | |
| LANDSCAPE ZONE: Unit is in Logjam Creek Watershed. | | | |
| Timber/Vegetation | Field Review: M. Case, 7/9/93 | Office Review: J. Goering | |
| Species composition predominantly hemlock but includes some spruce and cedar. Regeneration predominantly hemlock with some spruce but is lacking cedar. Relatively poor amounts of regeneration present. Regeneration concerns due to shallow rocky soils and the presence of salmonberry. Light amount of mistletoe infection evident in canopy. Steep slopes, rocky, relatively thin soils and exposed rock. Blowdown present in the northwest portion possibly due to poor soil drainage and shallow soils. | | | |
| Logging/Transportation | Field Review: J. Doyal/D. Keister/J. Herzberg, 7/08/93 | Office Review: C. Barnhart | |
| Yard to two landings. Requires 70' to 100' tower, slackline system to achieve partial suspension. Upper boundary below rock bluffs, split yard and directional fall away from Stream 1. 40% downhill and 60% uphill logging. See Rd #70-81-16 for transportation. | | | |
| Watershed/Fisheries | Field Review: J. Metzler/S. Tanguay, 7/07/93 | Office Review: G. McNaughton | |
| Two class III streams flow through original unit and become Class II downstream of unit. Stream 2 should be used as the southwest unit boundary (above topographic break). Directional fall and split yard away from Stream 1. | | | |
| Soils/Geology | Field Review: J. Metzler, 7/07/93 | Office Review: G. McNaughton | |
| Bluffs & slopes greater than 90% in southeast portion of unit should be excluded. Otherwise, achieve partial suspension where slopes are greater than 60% to minimize disturbance to shallow soils. Geology/Karst (D. Herron/R. Horrocks, 8/18/93): South half of unit traversed on foot; non-carbonate rock exposed. No limestone or karst observed. | | | |
| Wildlife | Field Review: S. Tanguay, 7/07/93 | Office Review: M. Hall | |
| Buffer muskegs to southeast by keeping unit boundary in productive forest. Bear sign/use evident. Much deer and crane use observed in this very large muskeg complex. Buffer muskegs to northwest of unit as well. Maintain Level 1 structure retention. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit not seen from any priority travel route or use area. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Exclude extremely steep areas of unit. Type A clearcut. Retain cedar less than 12" DBH in areas where logging damage can be minimized to promote additional cedar regeneration. Minimize soil disturbance to reduce the potential for increased salmonberry regeneration. 100' Class II stream buffer touches central portion of unit, split yard upstream within the unit. 100' Class II stream buffer touches north tip of unit. Achieve partial suspension on slopes > 60%. Mitigation measures for this unit are as follows: F1, F3, F4, F5, F6, W5, and W11. | | | |













CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD







VCU : 577

UNIT : 407

QUAD : D3-SW



-  Revised Control Lake Project Boundary
-  Post-Field Unit Boundary w/ Setting Codes
-  Other Post-Field Unit Boundaries
-  USFS Timber Types for Volc 4-7
-  Eagle Tree Buffer of 330ft
-  Existing & Rebuilt Roads
-  F.S. Roads Under Construction
-  Post-Field Proposed Roads
-  Ahmu-Class 1 & Stream Chantypes
-  Ahmu-Class 2 & Stream Chontypes
-  Ahmu-Class 3 & Stream Chontypes
-  Channel Type Change

-  Lakes and Ponds
 Second Growth Units
 MMI 4
 McGilvery > 41
 Landings
 Stream & Lake NoCUT Buffers

May 13, 1994

.5 MILE

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

| | | | |
|---|--|---|-------------------------|
| VCU #: 577 | UNIT #: 407 | QUARTER QUAD: D3SW | PHOTO YR/#: 1991/990-44 |
| ACRES: 25.4 | VOL.: 609.7 MBF | LOGGING SYSTEM: Mobile Yarder/Running Skyline | |
| LANDSCAPE ZONE: Unit is within upper Logjam Creek watershed. | | | |
| Timber/Vegetation | Field Review: M. Case/J. Miller, 7/16/93 | Office Review: J. Goering | |
| Species composition predominantly hemlock and cedar but a few spruce are present. Regeneration predominantly hemlock but includes some spruce and a few cedar. Moderately low volume, with < 50% canopy closure & relatively low site productivity. in northwest portion. Poor soil drainage areas along with Alaska yellow-cedar decline evident. Karst topography present. | | | |
| Logging/Transportation | Field Review: J. Herzzberg/M. Whitty, 7/19/93 | Office Review: K. Martin | |
| Unit is accessed by Road #71-82-25.2 and a small spur. This road crosses minor karst features. Access may be possible from Unit 577-405 (to south), but this will need to be field verified during final layout. This should avoid karst. Poor guy stumps and landing size require a swing yard machine. Partial suspension cannot be achieved. Most of the NW portion of the unit where partial suspension is recommended has been deleted. Partial cut not recommended. Good economics. | | | |
| Watershed/Fisheries | Field Review: M. Minnillo, 7/13/93, 8/14/93 | Office Review: G. McNaughton | |
| Stream on south end of unit flagged O/W to split yard away. No other streams in unit. | | | |
| Soils/Geology | Field Review: M. Minnillo, 7/13/93, 8/14/93 | Office Review: G. McNaughton | |
| Recommend partial suspension in northern 1/4 of unit due to steeper/wet slopes. <u>Geology/Karst (D. Herron/R. Horrocks, 8/18/93, 8/20/93, & 8/25/93):</u> Traversed on foot. Limestone on unit with 10' high cave entrance, phreatic tubes and erosion/solution scallops; second opening into grike. Cave is at least 60' long. Cobbles on floor of cave give evidence to previous high stream flows through the cave. Grikes, caves, and runnels observed. Observers would prefer to drop unit. Well developed karst and significant caves were found within the unit to the west of the small lake. Recommend dropping unit and moving road to avoid karst area. | | | |
| Wildlife | Field Review: M. Minnillo, 7/13/93, 8/14/93 | Office Review: M. Hall | |
| Recommend deleting northern 1/3 of unit due to the fact that the area between units 577-402 and 577-411 is primarily muskeg. Deleting north end of unit would maintain some high deer and bear habitat. Sandhill crane nesting sight near northwest corner of unit. Goose sign identified in muskeg east of unit. Contiguous old-growth stand. Retain level 1 structure. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit not seen from any priority travel route or use area. | | | |
| Cultural/Lands | Field Review: G. Walter, 8/19/93 | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit partially or completely within high probability area for cultural resources. Evaluated cave for cultural resources, none present. Move unit boundary to protect cave as a significant geological feature. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |

| | |
|--|--|
| Interdisciplinary Team Recommendations | |
|--|--|

Road and unit boundary should avoid all karst area. Road as laid out avoids karst and cave. There is also some room to move the road further from the karst boundary. Field review indicated this layout is feasible. Final layout and additional karst surveys in area should confirm these observations and that subsurface hydrologic connectivity does not preclude harvest in this area. Optional road location could come from east on bottom of unit from 577-405 or 406. Area in northern 1/4 of unit which had partial suspension recommended was excluded from unit. Timing restriction within 400 feet of muskeg east of unit if geese present during entry. Type A clearcut. Directionally fall trees away from Class III stream. Mitigation measures for this unit are as follows: F6, F8, M2, W5, and W11.

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




CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD







VCU : 577

UNIT : 408

QUAD : D3-SW



-  Revised Control Lake Project Boundary
-  Post-Field Unit Boundary w/ Setting Codes
-  Other Post-Field Unit Boundaries
-  USFS Timber Types for Volc 4-7
-  Eagle Tree Buffer of 330ft
-  Existing & Rebuilt Roads
-  F.S. Roads Under Construction
-  Post-Field Proposed Roads
-  Ahmu-Class 1 & Stream Chantypes
-  Ahmu-Class 2 & Stream Chantypes
-  Ahmu-Class 3 & Stream Chantypes
-  Channel Type Change

-  Lakes and Ponds
 Second Growth Units
 MMI 4
 McGilvery > 41
 Landings
 Stream & Lake NoCUT Buffers

May 13, 1994

.5 MILE

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

| | | | |
|--|---|---|--------------------------|
| VCU #: 577 | UNIT #: 408 | QUARTER QUAD: D3SW | PHOTO YR/#: 1991/890-123 |
| ACRES: 38.6 | VOL.: 928.4 MBF | LOGGING SYSTEM: Downhill Slackline with 70' Tower | |
| LANDSCAPE ZONE: Unit is within Logjam Creek Watershed. | | | |
| Timber/Vegetation | Field Review: J. Miller/M. Case, 7/9/93 | Office Review: J. Goering | |
| Species composition predominantly hemlock but includes cedar and some spruce. Regeneration predominantly hemlock with some spruce but is lacking cedar. Slope instability/failure potential existing. Evidence of a slide found along the south boundary. Large cliffs on the southwest side of the unit with slope instability below the cliffs a concern. Moderately low volume, with < 50% canopy closure & relatively low site productivity on the southwest side. | | | |
| Logging/Transportation | Field Review: K. Martin/J. Spolar, 7/09/93 | Office Review: C. Barnhart | |
| Suggest upper boundary be placed at base of rock bluffs. If 300' is left as suggested by soils, the timber would be isolated and loggable by helicopter. Recommend 70' to 100' tower using slackline system. Partial suspension available. Accessed by Rd #70-81-16. Upper Rd #70-81-16.1 is not needed and should not be constructed to unit. | | | |
| Watershed/Fisheries | Field Review: G. Jackson, 7/12/93 | Office Review: T. Stewart | |
| Three drainages transect upper part of unit, and as slopes decrease to east they increase in size and become habitable by fish, changing to Class II. Barriers or log jams and small waterfalls present. Split yard if possible on upper slopes; 100' buffer on lower slopes. | | | |
| Soils/Geology | Field Review: G. Jackson, 7/12/93 | Office Review: T. Stewart | |
| Lower (east) side is moderate to gentle, but upper half is very steep and unstable. Helicopter log areas above cliffs, but no cutting below cliffs - 300' level. | | | |
| Wildlife | Field Review: M. Minnillo, 7/12/93 | Office Review: | |
| Intensive deer trails and bed through unit, especially along rock bluffs in upper portion of unit. High deer use for hiding cover. Neighboring stands are very similar in habitat. Bear scat also prevalent in upper portion of unit. Harvesting of unit will delete this habitat; however adjacent areas are similar habitat types and will allow travel and hiding cover. Retain Level 1 structure. Contiguous old-growth. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit not seen from any priority travel route or use area. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Dropped a portion of upper 1/3 of unit due to slope stability concerns, very high MMI soils. Top of unit has been deferred for future helicopter harvest (isolated patch). End Rd. #70-81-16.1 at Unit 577-409, can be used as a helicopter landing site. Type A clearcut. Maintain 100' buffers on both Class II streams at north end of unit. Mitigation measures for this unit are as follows: F1, F6, and W5. | | | |













CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD







VCU : 577

UNIT : 409

QUAD : D3-SW



-  Revised Control Lake Project Boundary
-  Post-Field Unit Boundary w/ Setting Codes
-  Other Post-Field Unit Boundaries
-  USFS Timber Types for Volc 4-7
-  Eagle Tree Buffer of 330ft
-  Existing & Rebuilt Roads
-  F.S. Roads Under Construction
-  Post-Field Proposed Roads
-  Ahmu-Class 1 & Stream Chantypes
-  Ahmu-Class 2 & Stream Chantypes
-  Ahmu-Class 3 & Stream Chantypes
-  Channel Type Change

-  Lakes and Ponds
 Second Growth Units
 MMI 4
 McGilvery > 41
 Landings
 Stream & Lake NoCUT Buffers

May 13, 1994

.5 MILE

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

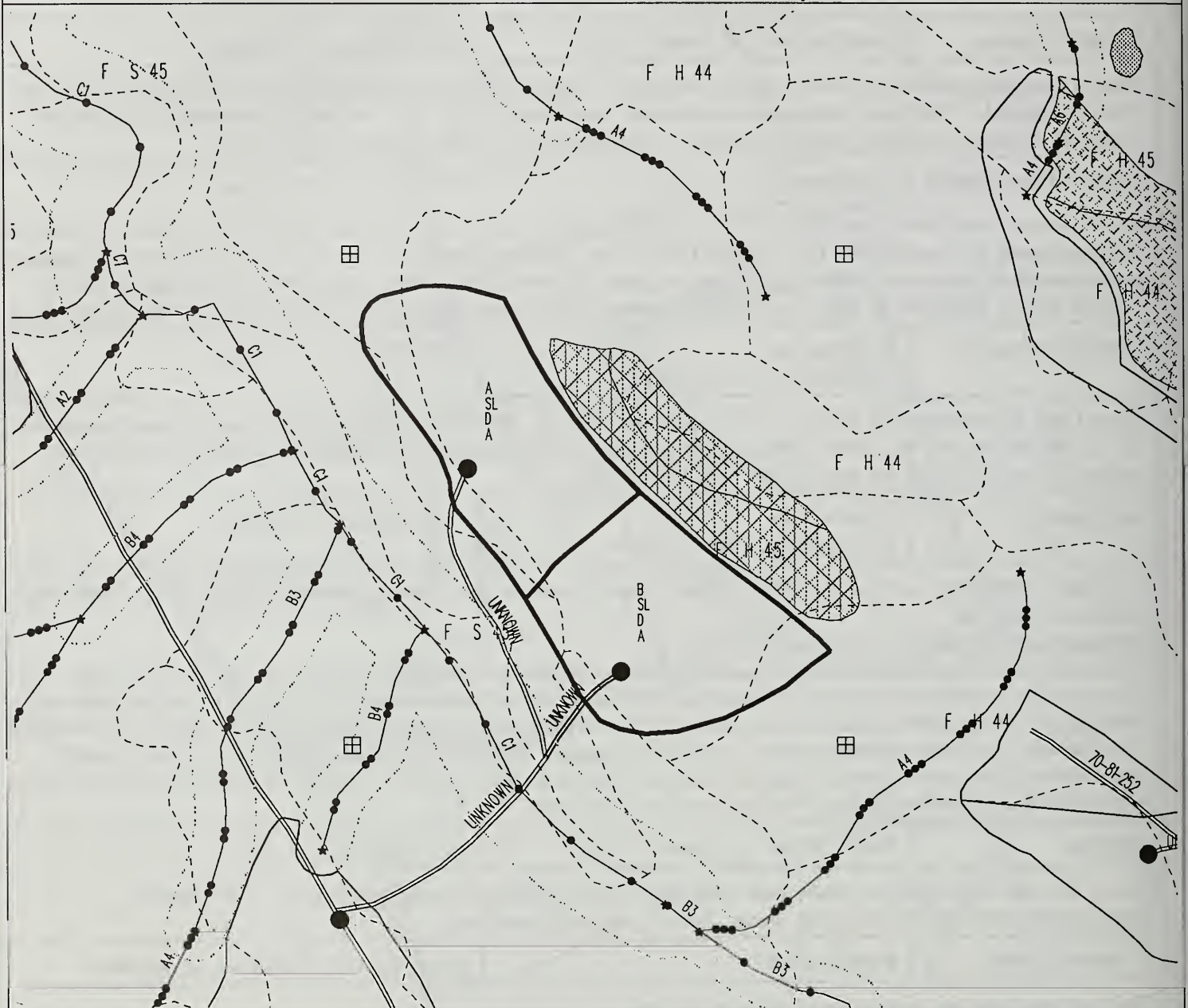
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|--|---|---|--------------------------|
| VCU #: 577 | UNIT #: 409 | QUARTER QUAD: D3SW | PHOTO YR/#: 1991/890-122 |
| ACRES: 62.8 | VOL.: 1980.9 MBF | LOGGING SYSTEM: 70' Slackline (E), Shovel (W), Highlead | |
| LANDSCAPE ZONE: Unit located in Logjam Creek Watershed. | | | |
| Timber/Vegetation | Field Review: M. Case, 7/17/93 | Office Review: J. Goering | |
| Species composition includes hemlock, spruce, and cedar. Regeneration predominantly hemlock with some spruce. Few cedar are present. Windthrow damage present in areas throughout the unit. Low to moderate amounts of stem decay evident in hemlock and cedar. Relatively shallow soils, and poor soil drainage areas within unit. | | | |
| Logging/Transportation | Field Review: T. Wetzell/C. Giles, 7/22/93 | Office Review: K. Martin | |
| Unit is accessed by Road #70-81-16.1 and Road #70-81-16. One spur branches off Road #70-81-16.1. Shovel yarding is recommended on spur on west side. Large trees require a 70 foot tower or large swing yarder on the rest of the unit. Western half of unit could be partial cut. Bluffs in center of unit were removed due to soils concerns. Good economics. | | | |
| Watershed/Fisheries | Field Review: G. Jackson/D. Crowe, 7/12/93 | Office Review: T. Stewart | |
| Three Class III streams are in the area. One bisects the unit, the other two lie on the northern and southern boundaries. The middle stream near the center of the unit has multiple, unstable channels. Recommend excluding this area from harvest. Harvest to break on slope on the other two streams. | | | |
| Soils/Geology | Field Review: G. Jackson/D. Crowe, 7/15/93 | Office Review: T. Stewart | |
| Very steep with MMI4 soil in a band that stretches through center of unit. Exclude this area from harvest. Many small slides have occurred. <u>Geology/Karst (D. Herron/R. Horrocks, 8/23/93):</u> Unit traversed on foot. Bedrock is a weak, soft mudstone. Numerous sinkholes, fissure caves, and tension cracks. These features usually infer underlying limestone. Tension cracks infer significantly large landslide potential, especially if disturbed. Unit possibly underlain by limestone; while no karst visible, suggest unit has potential and should be treated with concern. See slope stability concerns. Pseudokarst appears to be developing along large tension cracks in MMI area extending deep into bedrock. Large slope failure likely if area is disturbed. Recommend dropping center portion of unit due to unstable bedrock slope. No significant karst concerns. | | | |
| Wildlife | Field Review: D. Crowe, 7/15/93 | Office Review: M. Hall | |
| Heavy bear and deer sign/use. Many deer trails through small channels on east side of unit - small channels approximately 300' to 350' feet apart, steep. Level 1 structure retention. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit not seen from any priority travel route or use area. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Slope stability: Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. Tension cracks on slopes; imminent slope failure. | | | |
| Interdisciplinary Team Recommendations | | | |
| Directionally fall and split yard trees on Class III streams on boundary and within unit. The central portion of unit was dropped due to very high MMI soils and unstable bedrock. No significant karst concerns. Type A clearcut. Mitigation measures for this unit are: F1, F6, F10, and W5. | | | |

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

VCU : 577

UNIT : 410

QUAD : D3-SW



- Revised Control Lake Project Boundary
- Post-Field Unit Boundary w/ Setting Codes
- Other Post-Field Unit Boundaries
- USFS Timber Types for Volc 4-7
- Eagle Tree Buffer of 330ft
- Existing & Rebuilt Roads
- F.S. Roads Under Construction
- Post-Field Proposed Roads
- Ahmu-Class 1 & Stream Chantypes
- Ahmu-Class 2 & Stream Chantypes
- Ahmu-Class 3 & Stream Chantypes
- Channel Type Change

- Lakes and Ponds
- Second Growth Units
- MMI 4
- McGilvery > 41
- Landings
- Stream & Lake NoCUT Buffers

.5 MILE

August 03, 1994

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

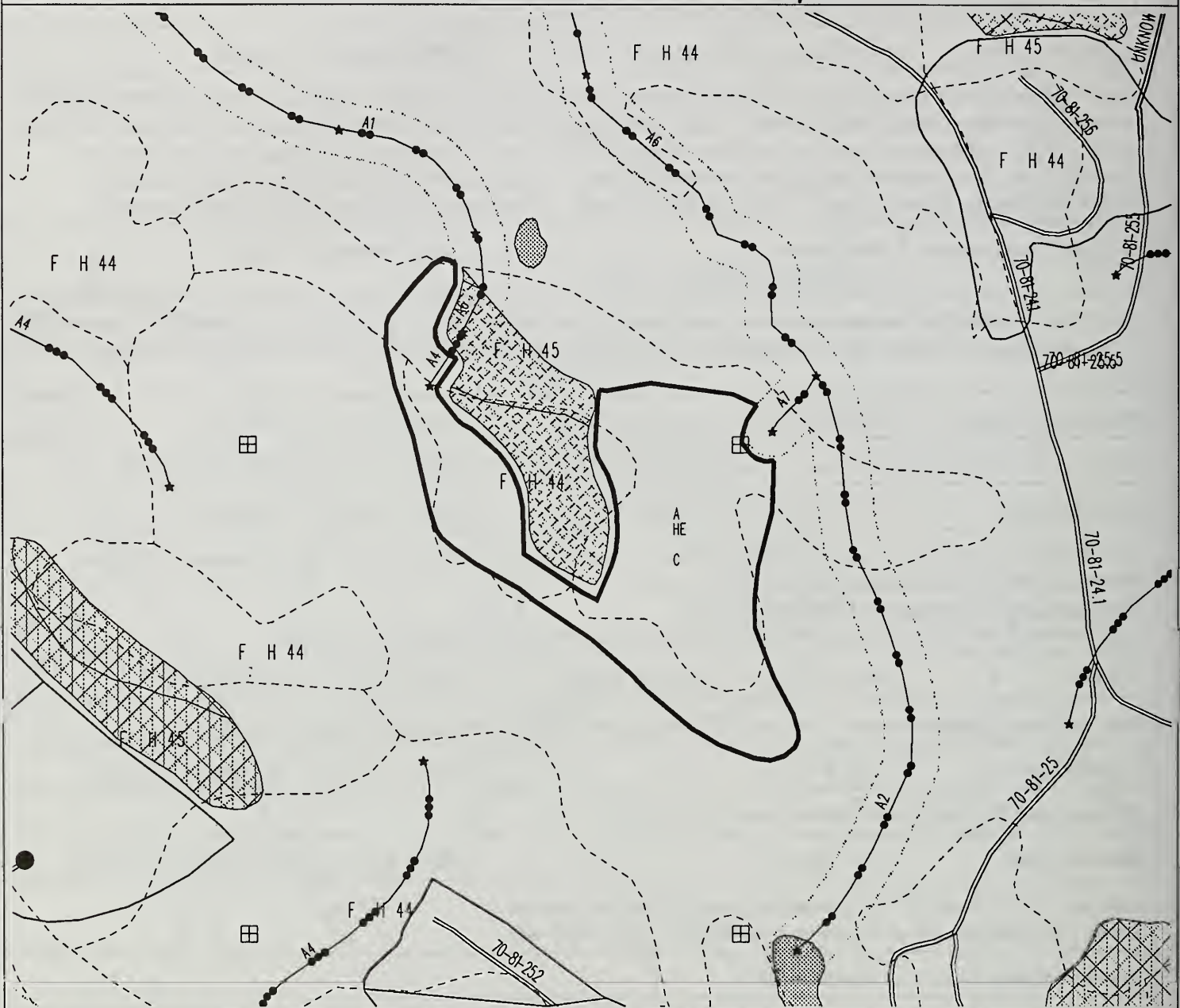
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| VCU #: 577 | UNIT #: 410 | QUARTER QUAD: D3SW | PHOTO YR/#: 1991/990-44 |
| ACRES: 31.9 | VOL.: 1347.9 MBF | LOGGING SYSTEM: Slackline Tower | |
| LANDSCAPE ZONE: Unit is within Logjam Creek watershed. | | | |
| Timber/Vegetation | Field Review: S. Karstens, 7/19/93 | Office Review: J. Goering | |
| <p>Species composition predominantly hemlock but includes some spruce, and cedar. Regeneration predominantly hemlock, includes some spruce but is lacking cedar. Light mistletoe evident in canopy. Poor regeneration in the upper elevations of the unit. Possible salmonberry and brush incursions with soil disturbance based on existing densities, although presently low. Rock bluffs on the higher elevations of the unit. Rocky, relatively thin soils and exposed rock. Potentially unstable slopes - slopes > 100% present in areas. Recommend helicopter logging, partial suspension.</p> | | | |
| Logging/Transportation | Field Review: M. Whitty/J. Herzberg, 7/16/93 | Office Review: J. Doyal | |
| <p>Paper plan could not be implemented due to steep adverse road grades, lack of guy stumps, and suspension requirements. To avoid helicopter logging, the IDT suggests downhill logging as shown on map. Road and logging system are not field verified.</p> | | | |
| Watershed/Fisheries | Field Review: G. Jackson, 7/13/93 | Office Review: T. Stewart | |
| <p>There are no streams within this unit. Class I stream along southwest boundary requires at least 200 ft buffer.</p> | | | |
| Soils/Geology | Field Review: G. Jackson, 7/13/93 | Office Review: T. Stewart | |
| <p>McGilvery soils are present on steep terrain on eastern third of unit. Full suspension logging required in this area. Partial suspension recommended in other steep areas. <u>Geology/Karst (D. Herron/R. Horrocks, 8/20/93):</u> Unit traversed on foot; no limestone or karst features observed. Non-carbonate rock found.</p> | | | |
| Wildlife | Field Review: G. Jackson, 7/13/93 | Office Review: R. Fairbanks | |
| <p>Bear and deer sign/use evident. Directionally fell trees away from two muskegs on western boundary.</p> | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| <p>Unit not seen from any priority travel route or use area.</p> | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| <p>Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit.</p> | | | |
| Interdisciplinary Team Recommendations | | | |
| <p>Maintain unit boundary below cliffs and unstable soils due to regeneration concerns and McGilvery soils (above 920'). Original field layout not feasible for logging due to soil problems and designated as helicopter logging. Subsequently, changed to slackline when upper portion of unit excluded. Type A and Type D (because of exclusion of upper portion) clearcut. Directionally fell trees away from muskeg at northwest corner and along southwestern boundary. Consequently, the harvest system and road were not field verified. Mitigation measures for this unit are as follows: F1, F2, W1, and W5.</p> | | | |

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

VCU : 577

UNIT : 411

QUAD : D3-SW



- Revised Control Lake Project Boundary
- Post-Field Unit Boundary w/ Setting Codes
- Other Post-Field Unit Boundaries
- USFS Timber Types for Volc 4-7
- Eagle Tree Buffer of 330ft
- Existing & Rebuilt Roads
- F.S. Roads Under Construction
- Post-Field Proposed Roads
- Ahmu-Class 1 & Stream Chantypes
- Ahmu-Class 2 & Stream Chantypes
- Ahmu-Class 3 & Stream Chantypes
- Channel Type Change

- Lakes and Ponds
- Second Growth Units
- MMI 4
- McGilvery > 41
- Landings
- Stream & Lake NoCUT Buffers

May 13, 1994

.5 MILE

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

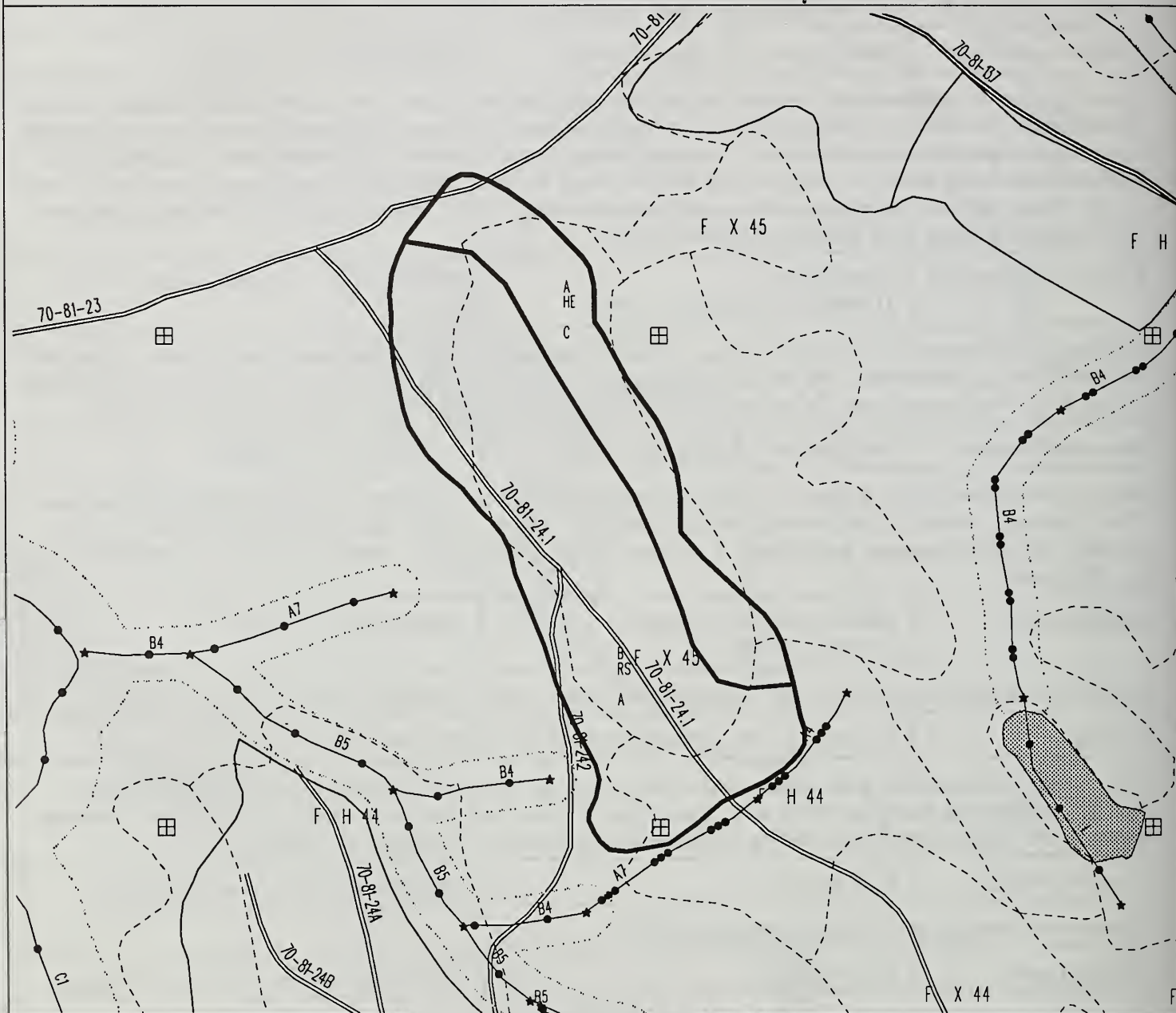
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| VCU #: 577 | UNIT #: 411 | QUARTER QUAD: D3SW | PHOTO YR/#: 1991/990-44 |
| ACRES: 28.8 | VOL.: 906.2 MBF | LOGGING SYSTEM: Helicopter | |
| LANDSCAPE ZONE: Unit is within Logjam Creek watershed. | | | |
| Timber/Vegetation | Field Review: M. Case, 7/15/93 | Office Review: J. Goering | |
| Species composition predominantly hemlock but includes cedar and some spruce. Regeneration predominantly hemlock and includes a few cedar but is lacking spruce. Muskeg incursions incorporated with mixed species, low volume timber in southeastern and southwestern portion. Windthrow damage and a rockslide present in the present in middle of unit. <u>Rock bluffs and steep slopes (> 100%) on the western side of the unit. Multi-species, multi-canopy stand with <50% canopy closure and low volume in southwest and southeast portion. Steep, rocky, relatively shallow soils on the west side. Poor soil drainage areas within the northeast portion.</u> | | | |
| Logging/Transportation | Field Review: M. Whitty/J. Herzberg, 7/17/93 | Office Review: J. Doyal, 8/13/93 | |
| This unit is recommended for helicopter logging. Stream 2 has numerous active and inactive beaver dams. There are also small forks in the muskeg north of the northeast corner of the unit which have no water, but may be rearing habitat at high flow. The measure point for the buffer was unclear and so was not flagged. Stream 3 was not observed. | | | |
| Watershed/Fisheries | Field Review: M. Minnillo, 7/13/93 | Office Review: T. Stewart | |
| Maintain 100' no-cut buffer on stream 1. Edge of beaver ponds on northeast corner of unit are potential rearing areas. Trout observed. Stream 2, just north of northwest boundary, is Class III in its upper reaches but is Class II in lower reaches. 100' buffer required, but probably is not close enough to impact unit. Stream 3 is a slide, recommend review by soil scientist. | | | |
| Soils/Geology | Field Review: M. Minnillo/G. Jackson, 7/13/93, 8/14/93 | Office Review: T. Stewart | |
| Cliffs and very steep slopes present with recent and older slides. Exclude steepest areas from harvest. | | | |
| Wildlife | Field Review: M. Minnillo, 7/13/93 | Office Review: M. Hall | |
| High use deer bedding/cover area. Dense stand of large hemlock. Steep and generally wet above 900' elevation. Several large standing dead trees within unit. Retain structure along unit boundary; retain Level 1 structure. Maintain northern unit boundary away from muskeg leaving trees approximately 15" with 50' of muskeg. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit not seen from any priority travel route or use area. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Area of MMI4 excluded from unit - not flagged in field. Ensure Class II stream buffers along stream on north and northeast boundary are maintained at 100' during final layout. Type C clearcut. Mitigation measures include: F1, F2, F5, and W3. | | | |

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

VCU : 577

UNIT : 412

QUAD : D3-SW



- Revised Control Lake Project Boundary
- Post-Field Unit Boundary w/ Setting Codes
- Other Post-Field Unit Boundaries
- USFS Timber Types for Volc 4-7
- Eagle Tree Buffer of 330ft
- Existing & Rebuilt Roads
- F.S. Roads Under Construction
- Post-Field Proposed Roads
- Ahmu-Class 1 & Stream Chantypes
- Ahmu-Class 2 & Stream Chantypes
- Ahmu-Class 3 & Stream Chantypes
- Channel Type Change

- Lakes and Ponds
- Second Growth Units
- MMI 4
- McGilvery > 41

- Landings
- Stream & Lake NoCUT Buffers

May 13, 1994

.5 MILE

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

| | | | |
|---|---|--|-------------------------|
| VCU #: 577 | UNIT #: 412 | QUARTER QUAD: D3SW | PHOTO YR/#: 1991/990-46 |
| ACRES: 49.9 | VOL.: 1224.8 MBF | LOGGING SYSTEM: Running Skyline/Helicopter | |
| LANDSCAPE ZONE: Unit is in Logjam Creek watershed. | | | |
| Timber/Vegetation | Field Review: J. Miller, 7/12/93 | Office Review: J. Goering | |
| Species composition predominantly hemlock but includes cedar and a few spruce. Predominantly hemlock regeneration. Very sparse spruce and cedar regeneration. High amount of mistletoe infection evident in canopy. Promote spruce and cedar regeneration through planting and precommercial thinning. Harvest all hemlock and cut advanced regeneration. Windthrow potential limits partial retention feasibility. | | | |
| Logging/Transportation | Field Review: K. Martin/J. Spolar, 7/14/93 | Office Review: K. Martin | |
| Unit is accessed by Road #70-81-24. Recommend swing yarding with running skyline. A road was located to access the NE strip. Economics suggest that helicopter yarding is a better alternative for this strip. A mobile tailhold is recommended for the west side. Partial suspension is possible on most of the unit. Good economics. | | | |
| Watershed/Fisheries | Field Review: B. Romey, 7/09/93 | Office Review: T. Stewart | |
| Directional fell along Class III stream at south boundary. | | | |
| Soils/Geology | Field Review: M. Minnillo, 7/09/93 | Office Review: T. Stewart | |
| North part of unit has bluffs, recommend partial suspension in north 1/2 of unit. | | | |
| Wildlife | Field Review: M. Minnillo, 7/09/93 | Office Review: M. Hall | |
| No concerns. Level 1 structure retention. Goshawk survey conducted - no detections. High deer and bear use. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit not seen from any priority travel route or use area. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Directional fall trees along Class III streams at south boundary. Achieve partial suspension in north 1/2 of unit. Recommend dropping upper road and helicopter logging upper part of unit. Type A clearcut on west 1/2 of unit and Type C on east 1/2 of unit being helicopter harvested. Mitigation measures for this unit are as follows: F1, F6, F8, W3, W5, and W11. | | | |

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

VCU : 577

UNIT : 413

QUAD : D3-SW



- Revised Control Lake Project Boundary
- Post-Field Unit Boundary w/ Setting Codes
- Other Post-Field Unit Boundaries
- USFS Timber Types for Volc 4-7
- Eagle Tree Buffer of 330ft
- Existing & Rebuilt Roads
- F.S. Roads Under Construction
- Post-Field Proposed Roads
- Ahmu-Class 1 & Stream Chantypes
- Ahmu-Class 2 & Stream Chantypes
- Ahmu-Class 3 & Stream Chantypes
- Channel Type Change

- Lakes and Ponds
- Second Growth Units
- MMI 4
- McGilvery > 41
- Landings
- Stream & Lake NoCUT Buffers

May 13, 1994

.5 MILE

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

| | | | |
|---|---|--|-------------------------------|
| VCU #: 577 | UNIT #: 413 | QUARTER QUAD: D3SW | PHOTO YR/#: 1991/13-990-64 |
| ACRES: 41.3 | VOL.: 712.9 MBF | LOGGING SYSTEM: Running Skyline/Shovel Log | |
| LANDSCAPE ZONE: Unit is in Logjam Creek watershed. | | | |
| Timber/Vegetation | Field Review: M. Case, 7/12/93 | Office Review: J. Goering | |
| Species composition predominantly hemlock and cedar but a few spruce and lodgepole are present. In northwestern half, hemlock with a few yellow-cedar are present in the overstory. Regeneration predominantly hemlock but includes a few cedar and spruce. Moderately low volume mixed species with < 50% canopy closure and relatively low site productivity on southeast half. Moderate amount of mistletoe infection evident in canopy of northwestern half. Fairly dense understory vegetation. Predominantly hemlock regeneration throughout. | | | |
| Logging/Transportation | Field Review: K. Martin/J. Spolar, 7/13/93 | Office Review: K. Martin | |
| Unit is accessed by Road #70-81-24 and two spurs. Shovel log the NE 1/2 and swing yard the SW 1/2 using running skyline. Partial suspension is possible although not required. Tailholds are poor on the east side. Use mobile tailspar, tie-backs, or shovel log. Partial cut is possible. Economics are fair to poor. A 100 foot stream buffer is on the SW and NE sides. | | | |
| Watershed/Fisheries | Field Review: B. Romey, 7/09/93 | Office Review: T. Stewart | |
| Streams along southwest and northeast boundaries are Class I and need 100' buffer. Stream along northeast boundary also needs additional 50' selective buffer. Stream near southeast boundary is a Class IIa and needs a 100' buffer and 50' selective buffer. | | | |
| Soils/Geology | Field Review: J. Metzler, 7/09/93 | Office Review: T. Stewart | |
| No soils concerns observed. Gentle slopes, generally a dry site. | | | |
| Wildlife | Field Review: J. Metzler, 7/09/93 | Office Review: M. Hall | |
| Deer sign/use throughout area. Structure will be maintained by Class I stream buffers on the east and west sides of unit. Contiguous old-growth tract. Retain Level 1 retention. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit not seen from any priority travel route or use area. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Maintain 100' buffers Class I and II streams on southwest, southeast, and east-northeast boundary. Additional 50' selective harvest on Class I along northeast and Class IIa on southwest. In selective harvest stream buffers retain all cedars and hemlock below approximately 15" DBH. This will provide seed source for additional cedar regeneration. Type A clearcut for remainder of unit. Mitigation measures for this unit are as follows: F5, F10, and W5. | | | |



















CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

VCU : 577

UNIT : 414

QUAD : D3-SW



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|---|---|---|-----------------------------|
|  | Revised Control Lake Project Boundary |  | Lakes and Ponds |
|  | Post-Field Unit Boundary w/ Setting Codes |  | Second Growth Units |
|  | Other Post-Field Unit Boundaries |  | MMI 4 |
|  | USFS Timber Types for Volc 4-7 |  | McGilvery > 41 |
|  | Eagle Tree Buffer of 330ft |  | Landings |
|  | Existing & Rebuilt Roads |  | Stream & Lake NoCUT Buffers |
|  | F.S. Roads Under Construction | | |
|  | Post-Field Proposed Roads | | |
|  | Ahmu-Class 1 & Stream Chantypes | | |
|  | Ahmu-Class 2 & Stream Chantypes | | |
|  | Ahmu-Class 3 & Stream Chantypes | | |
|  | Channel Type Change | | |

May 13, 1994

.5 MILE

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

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|--|---|---|--------------------------|
| VCU #: 577 | UNIT #: 414 | QUARTER QUAD: D3SW | PHOTO YR/#: 1991/890-121 |
| ACRES: 57.3 | VOL.: 2179.0 MBF | LOGGING SYSTEM: Live Skyline/Slackline with 90' Tower | |
| LANDSCAPE ZONE: Unit is within Logjam Creek watershed. | | | |
| Timber/Vegetation | Field Review: S. Karstens, 7/17/93 | Office Review: J. Goering | |
| Species composition predominantly hemlock but includes some spruce, and cedar. Regeneration predominantly hemlock with a few spruce but is lacking cedar. Low to moderate amounts of mistletoe infection evident in canopy. Rock bluffs and steep slopes in the south portion of the unit. Regeneration concerns due to shallow soils, low site index, and the presence of salmonberry in the western corner. Salmonberry present in areas throughout stand. | | | |
| Logging/Transportation | Field Review: K. Martin/J. Spolar, 7/17/93 | Office Review: K. Martin | |
| Unit is accessed by Road #70-81-16 and 70-81-16.1. Use a 100 foot tower with shotgun system for uphill and slackline system for downhill yarding. Partial suspension is available. Upper landings may need tie-backs for guy stumps. Low blowdown potential, however, you may want to feather edges. Partial cut not practical. Good economics. | | | |
| Watershed/Fisheries | Field Review: R. Rogers, 7/13/93 | Office Review: T. Stewart | |
| Stream along north boundary is Class III, split yard and directional fall. Blowdown from southerly winds along this stream may present a problem. Consider moving north boundary to south. Maintain 100' buffer on the two Class II streams at southeast boundary. | | | |
| Soils/Geology | Field Review: R. Rogers, 7/13/93 | Office Review: T. Stewart | |
| Full suspension suggested between 800' and 1,000' elevation with partial suspension over rest of unit to reduce surface erosion of thin mineral soils. Numerous shallow ephemeral gullies present throughout unit. Nature of soils may result in high blowdown potential. Gullying. | | | |
| Wildlife | Field Review: H. Sloan, 7/13/93 | Office Review: M. Hall | |
| Level 1 structure retention. Dawn murrelet survey conducted. Occupancy behavior confirmed. Goshawk survey conducted - no detections. Contiguous old-growth track. Bear and deer use/sign evident. Wolves howling near unit; scat found in unit. Woodpeckers audible. Cranes observed. Large muskegs above and below unit. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit not seen from any priority travel route or use area. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Directionally fall and split yard Class III streams. Maintain 100' buffer on the two Class II segments on southeast boundary. Partial suspension possible over entire unit. Full suspension recommended between 800' and 1000'. Minimize soil disturbance in west corner if possible to avoid creation of salmonberry brushfield. Type A clearcut due to windthrow potential and mistletoe infection. Attempt to leave relatively larger unmerchantable zone along streams bordering unit to help maintain windfirmness. Mitigation measures for this unit are as follows: F6, F8, and W5. | | | |

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

VCU : 577

UNIT : 415

QUAD : D3-SW



- Revised Control Lake Project Boundary
- Post-Field Unit Boundary w/ Setting Codes
- Other Post-Field Unit Boundaries
- USFS Timber Types for Volc 4-7
- Eagle Tree Buffer of 330ft
- Existing & Rebuilt Roads
- F.S. Roads Under Construction
- Post-Field Proposed Roads
- Ahmu-Class 1 & Stream Chantypes
- Ahmu-Class 2 & Stream Chantypes
- Ahmu-Class 3 & Stream Chantypes
- Channel Type Change

- Lakes and Ponds
- Second Growth Units
- MMI 4
- McGilvery > 41
- Landings
- Stream & Lake NoCUT Buffers

May 13, 1994

.5 MILE

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

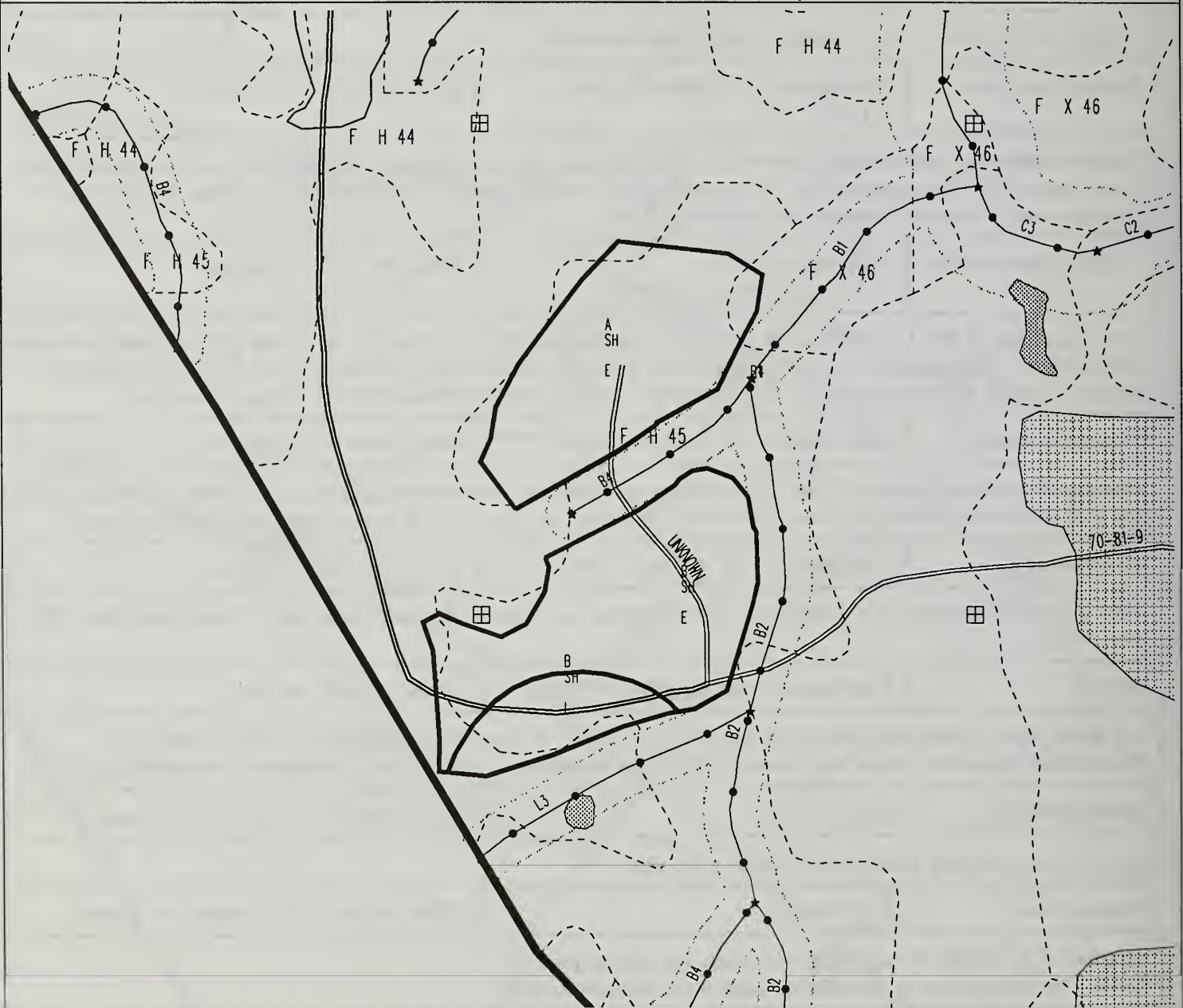
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|---|--|--|--------------------------|
| VCU #: 577 | UNIT #: 415 | QUARTER QUAD: D3SW | PHOTO YR/#: 1991/890-121 |
| ACRES: 81.8 | VOL.: 2711.2 MBF | LOGGING SYSTEM: Shovel, Shotgun and Highlead with 100' Tower | |
| LANDSCAPE ZONE: Unit is within Logjam Creek watershed. | | | |
| Timber/Vegetation | Field Review: T. Stecher/G. Hedin, 7/12/93 | Office Review: J. Goering | |
| Species composition predominantly hemlock but includes cedar and some spruce. Predominantly hemlock regeneration. Sparse spruce and cedar regeneration. Alaska yellow cedar decline evident. Relatively shallow soils, and poor soil drainage areas within unit. Steep in the southern section. | | | |
| Logging/Transportation | Field Review: K. Martin/J. Spolar, 7/17/93 | Office Review: K. Martin | |
| Unit is accessed by Road #70-81-16 and 70-81-16.1. Shovel log SW strip. Shotgun yard with 100 foot tower in western cable settings. Highlead downhill using 100 foot tower on NE cable settings. Partial suspension is possible where required. Partial cut is not practical. Fair economics. A short 100 foot stream buffer is along northern tip. | | | |
| Watershed/Fisheries | Field Review: B. Romey, 6/30/93 | Office Review: T. Stewart | |
| Directionally fall trees from the Class III streams on southwest and east-northeast portions of boundary. Directionally fall and split yard Class III stream in unit. Maintain 100' buffers on Class I and II stream segments at bottom of unit. | | | |
| Soils/Geology | Field Review: M. Minnillo, 6/30/93 | Office Review: T. Stewart | |
| Achieve partial suspension if possible above 800' elevation due to seeps and loose, rocky soil. Slopes range from 10 to 60%. | | | |
| Wildlife | Field Review: M. Minnillo, 6/30/93 | Office Review: M. Hall | |
| Old active beaver ponds along north unit boundary. Hillside is a corridor between upper and lower muskegs. Recommend maintaining lower unit boundary 200' from beaver pond. Retain Level 1 structure; contiguous old-growth. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit not seen from any priority travel route or use area. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Directionally and split yard Class III streams in unit and along boundary. Maintain 100' buffers on Class I and II stream segments along lower boundary. Partial suspension possible above 800' elevation. Type A clearcut leaving as much structure as possible along north boundary. Mitigation measures for this unit are: F6, F8, F10, and W5. | | | |

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

VCU : 577

UNIT : 416

QUAD : D4-SE



- Revised Control Lake Project Boundary
- Post-Field Unit Boundary w/ Setting Codes
- Other Post-Field Unit Boundaries
- USFS Timber Types for Volc 4-7
- Eagle Tree Buffer of 330ft
- Existing & Rebuilt Roads
- F.S. Roads Under Construction
- Post-Field Proposed Roads
- Ahmu-Class 1 & Stream Chantypes
- Ahmu-Class 2 & Stream Chantypes
- Ahmu-Class 3 & Stream Chantypes
- Channel Type Change

- Lakes and Ponds
- Second Growth Units
- MMI 4
- McGilvery > 41
- Landings
- Stream & Lake NoCUT Buffers

May 13, 1994

.5 MILE

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

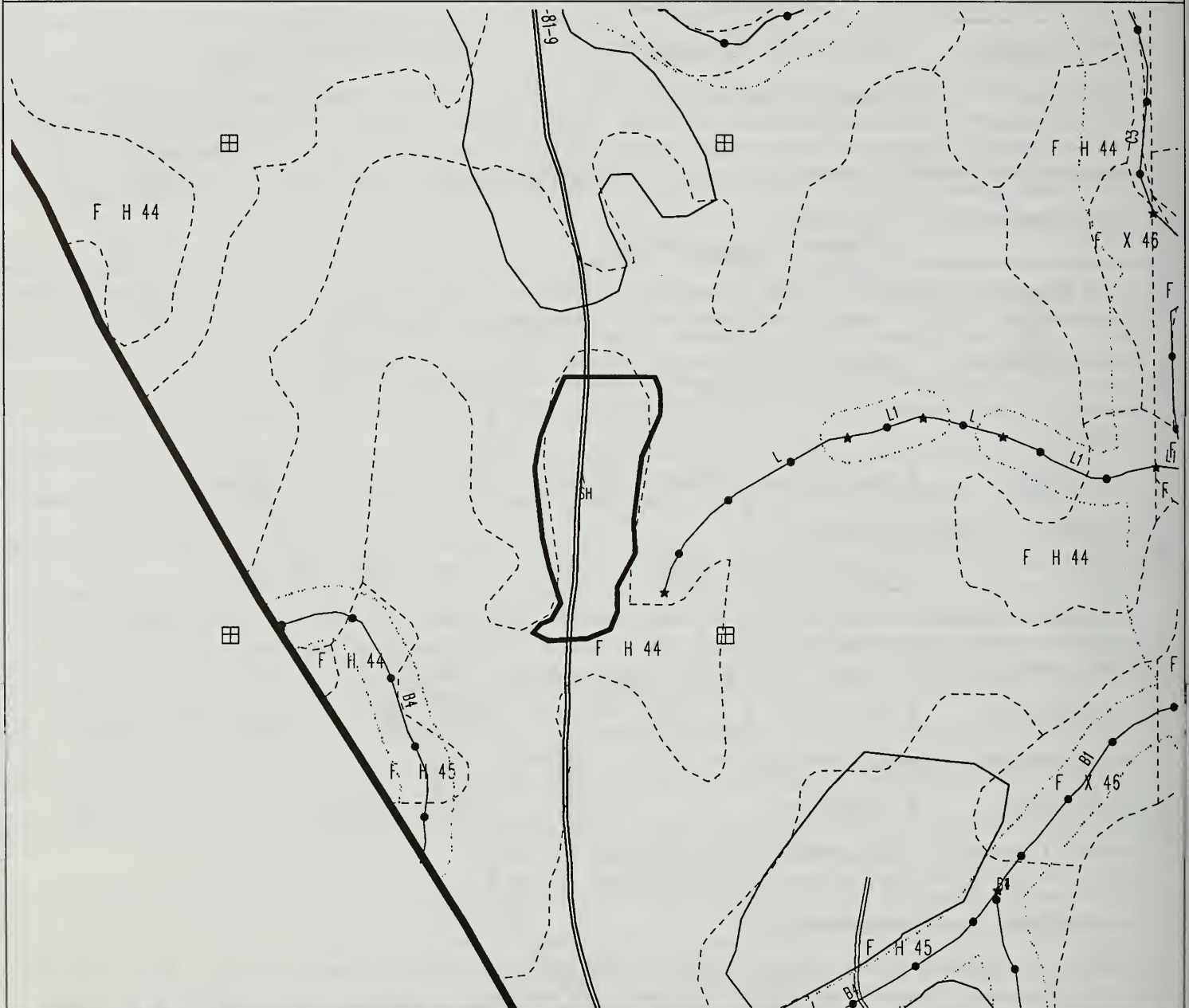
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|--|--|---|--------------------------|
| VCU #: 577 | UNIT #: 416 | QUARTER QUAD: D4SE | PHOTO YR/#: 1991/1190-56 |
| ACRES: 38.3 | VOL.: 938.6 MBF | LOGGING SYSTEM: Shovel | |
| LANDSCAPE ZONE: Unit is within proposed Goshawk PFA. | | | |
| Timber/Vegetation | Field Review: B. Hasebe, 7/27/93 | Office Review: J. Goering | |
| Species composition predominantly hemlock and a few spruce. Regeneration predominantly hemlock with a few spruce but is lacking cedar. Fairly dense understory vegetation. Light amount of mistletoe infection evident in the canopy of the eastern boundary. Regeneration concerns due to low site index soils in the western portion. Consider partial retention/seedtree harvest to promote regenerative success and desirable species composition on western edge. | | | |
| Logging/Transportation | Field Review: T. Wetzel/G. Slawson, 7/26/93 | Office Review: K. Martin | |
| Unit is accessed by Road #70-81-9. Recommend shovel logging entire unit. Partial cut is possible. The south and east boundaries have a 100 foot stream buffer. South end of unit was dropped due to buffers. Good economics. | | | |
| Watershed/Fisheries | Field Review: B. Romey, 7/27/93 | Office Review: T. Stewart | |
| Streams 1, 2, and 3 are all Class I, B/W, 100' TTRA buffers. Stream 2 only extends 3/4 of the way into unit before ending. | | | |
| Soils/Geology | Field Review: M. Metzler, 7/22/93 | Office Review: T. Stewart | |
| Low slopes, no evidence of instability. | | | |
| Wildlife | Field Review: M. Metzler, 7/22/93 | Office Review: M. Hall | |
| Recommend extending Class I stream buffer in center of unit through to the west side of unit in order to leave a contiguous corridor through unit for deer travel. Other structure to be retained along unit boundary and around beaver ponds in south end of unit. Retain Level 2 structure due to adjacency to heavily harvested areas. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit not seen from any priority travel route or use area. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Maintain 100' no-harvest buffer on Class I stream that bisects unit and on south and east side of unit. Maintain structure by Type E overstory removal of all trees 17" DBH and larger selecting for occasional smaller hemlocks along eastern portion of unit if heavily mistletoed. Small Class I lake south of the unit should receive a 100' no-cut plus a 400' selective cut buffer. Mitigation measures for this unit are as follows: F5, F8, F10, and W2. | | | |

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

VCU : 577

UNIT : 417

QUAD : D4-SE



- Revised Control Lake Project Boundary
- Post-Field Unit Boundary w/ Setting Codes
- Other Post-Field Unit Boundaries
- USFS Timber Types for Volc 4-7
- Eagle Tree Buffer of 330ft
- Existing & Rebuilt Roads
- F.S. Roads Under Construction
- Post-Field Proposed Roads
- Ahmu-Class 1 & Stream Chantypes
- Ahmu-Class 2 & Stream Chantypes
- Ahmu-Class 3 & Stream Chantypes
- Channel Type Change

- Lakes and Ponds
- Second Growth Units
- MMI 4
- McGilvery > 41
- Landings
- Stream & Lake NoCUT Buffers

August 03, 1994

.5 MILE

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

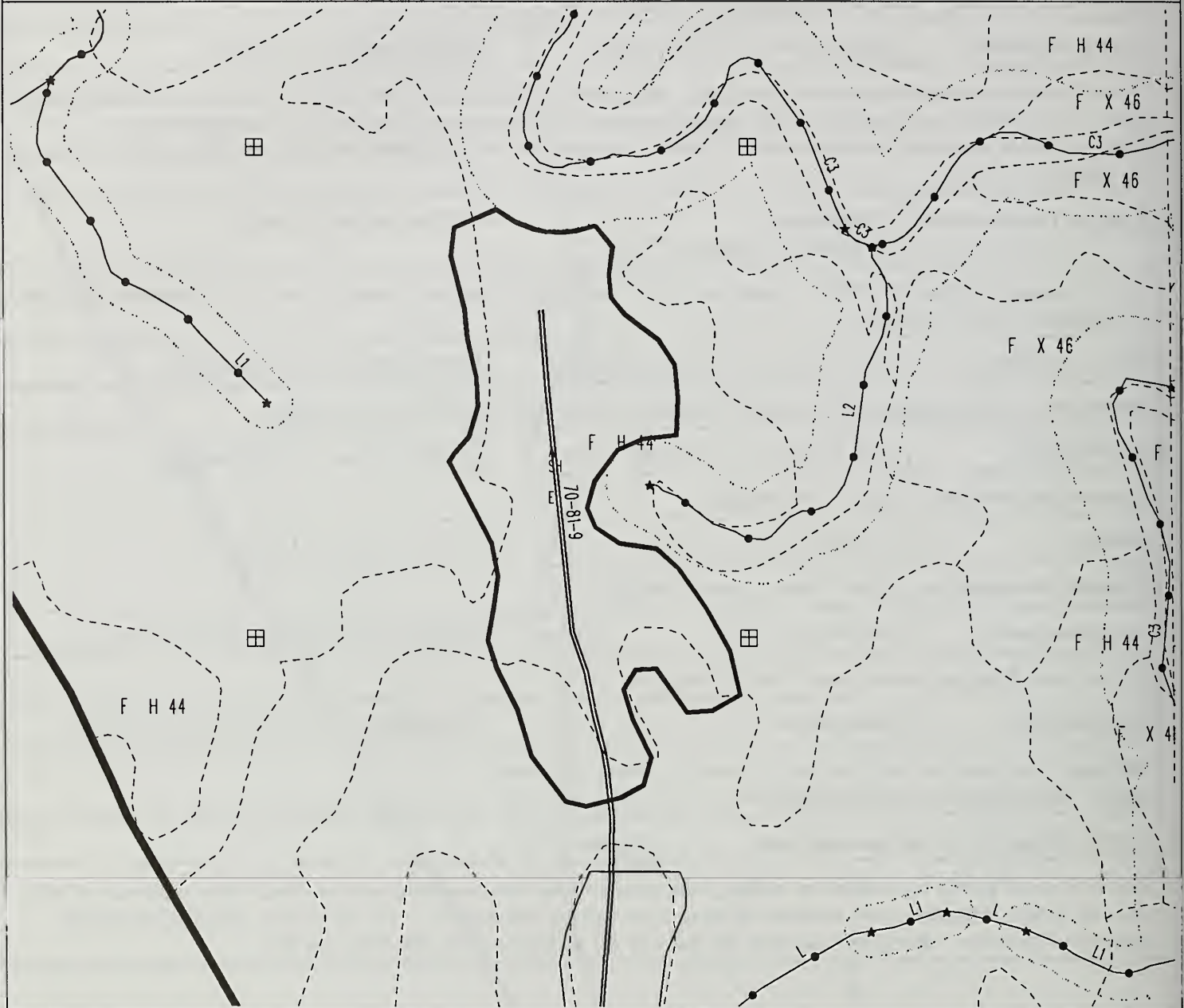
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|---|--|---|--------------------------|
| VCU #: 577 | UNIT #: 417 | QUARTER QUAD: D4SE | PHOTO YR/#: 1991/1190-56 |
| ACRES: 8.9 | VOL.: 122.7 MBF | LOGGING SYSTEM: Shovel | |
| LANDSCAPE ZONE: Unit is within proposed Goshawk PFA. | | | |
| Timber/Vegetation | Field Review: J. Miller, 8/2/94 | Office Review: J. Goering | |
| Species composition includes hemlock, and cedar. Regeneration predominantly hemlock but includes some unacceptable cedar. Low volume, multi-species, multi-canopy stand with < 50% canopy closure & low site productivity. Light amount of mistletoe infection evident in canopy. Analyze for feasibility given the low site index and low volume of the stand. | | | |
| Logging/Transportation | Field Review: T. Wetzel/G. Slawson, 7/29/93 | Office Review: K. Martin | |
| Unit is accessed by Road #71-81-9. Recommend shovel yarding. Partial cut is possible. A 200 foot buffer is along the SE boundary. Good economics. | | | |
| Watershed/Fisheries | Field Review: B. Romey, 7/22/93 | Office Review: G. McNaughton | |
| No streams in unit. Eastern portion of unit is selective harvest only due to Class I lake buffer. | | | |
| Soils/Geology | Field Review: M. Minnillo, 7/22/93 | Office Review: G. McNaughton | |
| Gentle slopes with good stability. No concerns. | | | |
| Wildlife | Field Review: M. Minnillo, 7/22/93 | Office Review: M. Hall | |
| Generally low animal use in unit. Retain Level 1 structure. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit not seen from any priority travel route or use area. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | Reviewed By: | |
| Unit (8.9 acres) mostly surrounded by muskeg with some existing structure along narrow Class I lake southwest of unit (10 - 40 MBF). Maintain some structure by using Type I group selection of ≥ 16 " DBH trees, selecting mistletoed hemlocks if possible. Mitigation measures for this unit are as follows: F5, F8, F10, and W2. | | | |

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

VCU : 577

UNIT : 418

QUAD : D4-SE



- Revised Control Lake Project Boundary
- Post-Field Unit Boundary w/ Setting Codes
- Other Post-Field Unit Boundaries
- USFS Timber Types for Volc 4-7
- Eagle Tree Buffer of 330ft
- Existing & Rebuilt Roads
- F.S. Roads Under Construction
- Post-Field Proposed Roads
- Ahmu-Class 1 & Stream Chantypes
- Ahmu-Class 2 & Stream Chantypes
- Ahmu-Class 3 & Stream Chantypes
- Channel Type Change

- Lakes and Ponds
- Second Growth Units
- MMI 4
- McGilvery > 41
- Landings
- Stream & Lake NoCUT Buffers

May 13, 1994

.5 MILE

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

| | | | |
|---|--|---------------------------------------|--------------------------|
| VCU #: 577 | UNIT #: 418 | QUARTER QUAD: D4SE | PHOTO YR/#: 1991/1190-57 |
| ACRES: 36.2 | VOL.: 895.9 MBF | LOGGING SYSTEM: Shovel | |
| LANDSCAPE ZONE: Unit is located at south end of proposed Goshawk PFA. | | | |
| Timber/Vegetation | Field Review: J. Miller, 7/31/93 | Office Review: J. Goering | |
| Species composition predominantly hemlock but includes cedar and some spruce. Regeneration predominantly hemlock but includes 5% cedar and 5% spruce. Low volume, multi-species, multi-canopy stand with < 50% canopy closure, and mapped as low site productivity. Low to moderate amounts of mistletoe infection evident in canopy. Minimize soil compaction and promote spruce/cedar regeneration through partial retention or planting. Occasional very large trees in unit. | | | |
| Logging/Transportation | Field Review: T. Wetzel/G. Slawson, 7/29/93 | Office Review: K. Martin | |
| Unit is accessed by Road #70-81-6. Shovel log entire unit. A 200 foot stream buffer is to north and a 150 foot buffer is on east side. Good economics. Partial cut is possible. | | | |
| Watershed/Fisheries | Field Review: B. Romey, 7/22/93 | Office Review: T. Stewart | |
| Stream at north unit boundary is a Class I, B/W, 200' TTRA buffer. Stream east of unit is a Class I, B/W, 150' TTRA buffer. | | | |
| Soils/Geology | Field Review: M. Minnillo, 7/22/93 | Office Review: T. Stewart | |
| Low, slightly rolling, slopes; predominantly dry site. No stability concerns. | | | |
| Wildlife | Field Review: M. Minnillo, 7/22/93 | Office Review: M. Hall | |
| Model Goshawk habitat. Recommend follow-up survey. Low wildlife sign. Low forage except along stream. Class I stream on north of unit and along west side of unit on muskeg. Retain Level 1 structure. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit not seen from any priority travel route or use area. | | | |
| Cultural/Lands | Field Review: J. Wilmot, 8/17/93 | Office Review: T.W. Greiser | |
| Cultural - Unit partially or completely within high probability area for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Stream at north end requires a 200' buffer. Stream 2 to the east requires a 150' buffer. Goshawk radio location in the vicinity. Goshawk nest identified to the north. A follow-up survey should be conducted. Maintain structure by using Type E overstory removal taking 18" DBH and larger and other small hemlock if infected with mistletoe. Retain large cedar and spruce along road for possible small sale/specialty wood opportunity. Mitigation measures are as follows: F5, F8, F10, W2, W9 and W11. | | | |

NO UNIT MAP

UNIT DROPPED OR DEFERRED

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

| | | | |
|---|---|--------------------|---------------------------------------|
| VCU #: 577 | UNIT #: 420 | QUARTER QUAD: D4SE | PHOTO YR/#: 1991/1190-58 |
| ACRES: | VOL.: | LOGGING SYSTEM: | |
| LANDSCAPE ZONE: | | | |
| Timber/Vegetation | Field Review: J. Miller | | Office Review: J. Goering |
| Species composition predominantly hemlock and cedar but a few spruce are present. Predominantly hemlock regeneration. Poor spruce and western red cedar regeneration. Muskeg inclusions within the unit. Light amount of mistletoe infection evident in canopy. Windthrow damage present in portions of unit. Streams present around unit and buffers will exclude much of it. | | | |
| Logging/Transportation | Field Review: K. Martin/J. Graves/T. Benthin, 8/2/93 | | Office Review: M. Whitty |
| Recommend helicopter logging due to high road construction costs and large stream crossings. Yard logs to unit 577-421. Flight distance is 3750 feet with zero percent slope. Recommend partial cutting to avoid expensive yarding of low value timber. Buffers are not flagged. Poor to fair economics. | | | |
| Watershed/Fisheries | Field Review: B. Romey, 7/19/93 | | Office Review: |
| Stream 1 needs 100' TTRA buffer. Stream 2 is a lake, needs 100' no-cut plus a 400' selective harvest. Stream 3 needs 150' no-cut TTRA buffer. Stream 4 needs 200' no-cut TTRA buffer. | | | |
| Soils/Geology | Field Review: M. Minnillo, 7/19/93 | | Office Review: |
| Low, gentle slopes. No sign of instability. Only concern is the large muskeg in the west end of unit. Require deleting muskeg from unit to prevent yarding through muskeg. | | | |
| Wildlife | Field Review: M. Minnillo, 7/19/93 | | Office Review: M. Hall |
| TTRA buffers will provide structure on south and north sides of unit and around lake in center of unit. Recommend deleting muskeg in west end of unit. Wolf scat identified in unit. Hairy woodpecker observed and heard. Goose scat identified. Riparian corridor on south side of unit heavily traveled by deer, bear, and wolf. Retain Level 1 structure. | | | |
| Visual/Recreation | Field Review: | | Office Review: S. Bedross, M. Greenig |
| Unit not seen from any priority travel route or use area. | | | |
| Cultural/Lands | Field Review: S. Moorhead, 7/31/93 | | Office Review: T.W. Greiser |
| Cultural - Unit partially or completely within high probability area for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Unit adjacent to Goshawk PFA and within the proposed goshawk small block. Use by goshawks has been documented in this area. Most of entire unit is encompassed by buffers with only a small patch of merchantable timber located outside of buffered area. Buffers on Class I streams and lakes reduce unit to < 5 acres in size. The first group to review this unit proposed that access and harvest will likely lead to irreversible damage because of large creek (Logjam Creek) and its flooding and meandering. Also goose nesting in area and lakes would be affected. Unit dropped. The second group to review this unit also proposed to drop the unit due to low site productivity with poor regeneration. Irreparable resource damage may occur in attempting to harvest this area. Recommend that unit is removed from suitable base. | | | |

NO UNIT MAP

UNIT DROPPED OR DEFERRED

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

| | | | |
|--|--|---|-----------------------------|
| VCU #: 577 | UNIT #: 421 | QUARTER QUAD: D4SE | PHOTO YR/#: 1991/10-1190-33 |
| ACRES: | VOL.: | LOGGING SYSTEM: | |
| LANDSCAPE ZONE: Unit is in Goshawk Post-Fledging Area. | | | |
| Timber/Vegetation | Field Review: S. Karstens | Office Review: J. Goering | |
| Species composition predominantly hemlock but includes cedar and a few spruce. Predominantly hemlock regeneration. Poor spruce and western red cedar regeneration. Low to moderate amounts of mistletoe infection evident in canopy. Relatively open canopy. Poor soil drainage areas throughout. Small stream and boggy areas present in stand. Promote cedar and spruce regeneration through partial retention or seed tree harvest. Harvest all mistletoe infected hemlock and cut infected regeneration. | | | |
| Logging/Transportation | Field Review: J. Doyal/J. Graves, 7/28/93 | Office Review: K. Martin | |
| Unit is accessed by Road #69-81-32. Shovel log entire unit. Partial cut is feasible. A 150 foot stream buffer is to east and a 100 foot buffer to south. Economics are fair. | | | |
| Watershed/Fisheries | Field Review: B. Romey, 7/19/93 | Office Review: T. Stewart | |
| Use stream 4 as south unit boundary; B/W, Class IIa. Stream 2 needs 150' TTRA buffer. | | | |
| Soils/Geology | Field Review: M. Minnillo, 7/19/93 | Office Review: T. Stewart | |
| Low elevation, primarily flat unit. No instability concerns. | | | |
| Wildlife | Field Review: M. Minnillo, 7/19/93 | Office Review: M. Hall | |
| Retain bear pond outside unit boundary in northeast corner of unit. Structure will be maintained in Class I stream buffer to east of unit. Beaver dams in southern end of unit. This is a Class II 100' TTRA buffer stream which will maintain habitat around dams. Recommend eagle nest survey along stream on east side of unit prior to harvest. Retain Level 1 structure. Unit is within preliminarily designated goshawk PFA. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit not seen from any priority travel route or use area. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Unit deferred - within proposed Goshawk PFA. | | | |

NO UNIT MAP

UNIT DROPPED OR DEFERRED

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

| | | | |
|--|------------------------------------|---------------------------------------|--------------------------|
| VCU #: 577 | UNIT #: 422 | QUARTER QUAD: D4SE | PHOTO YR/#: 1991/1190-59 |
| ACRES: | VOL.: | LOGGING SYSTEM: | |
| LANDSCAPE ZONE: | | | |
| Timber/Vegetation | Field Review: B. Hasebe | Office Review: J. Goering | |
| <p>Species composition predominantly hemlock and cedar but a few spruce are present in the western half. Predominantly hemlock regeneration. Sparse spruce and cedar regeneration. Moderately low volume, multi-canopy stand with < 50% canopy closure and lower site productivity in the eastern half. Intermittent poor soil drainage and/or muskeg inclusions within the unit. Beaver pond in the west-central portion of the unit. Buffers will exclude this area. Recommend helicopter harvest with partial retention of the western and eastern portions of the unit.</p> | | | |
| Logging/Transportation | Field Review: | Office Review: M. Whitty 8/13/93 | |
| | | | |
| Watershed/Fisheries | Field Review: B. Romey, 7/23/93 | Office Review: | |
| <p>Stream 1 is a Class I, B/W, 100' TTRA buffer. Stream 2 is a Class IIa, B/W, 100' TTRA buffer. Stream 3 is a Class I, B/W, 100' TTRA buffer.</p> | | | |
| Soils/Geology | Field Review: M. Minnillo, 7/23/93 | Office Review: | |
| <p>Beaver pond in center of unit. Full suspension or split yarding required. Rest of unit is low slopes, predominantly dry site. No stability problems.</p> | | | |
| Wildlife | Field Review: M. Minnillo, 7/23/93 | Office Review: M. Hall | |
| <p>Structure will be retained in stream buffers along west side of unit and around beaver pond in center of unit. Much bear travel through beaver pond/slope area in middle of unit. Riparian areas along west side of unit is highly traveled corridor by deer/bear. High quality eagle nesting habitat on Log Jam Creek to west of unit. Retain Level 1 structure. Unit is within preliminarily designated Goshawk PFA.</p> | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| <p>Unit not seen from any priority travel route or use area.</p> | | | |
| Cultural/Lands | Field Review: J. Wilmot, 8/17/93 | Office Review: T.W. Greiser | |
| <p>Cultural - Unit partially or completely within high probability area for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit.</p> | | | |
| Interdisciplinary Team Recommendations | | | |
| <p>Deferred, due to proposed Goshawk PFA.</p> | | | |

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

VCU : 577

UNIT : 423

QUAD : D4-SE



- Revised Control Lake Project Boundary
- Post-Field Unit Boundary w/ Setting Codes
- Other Post-Field Unit Boundaries
- USFS Timber Types for Volc 4-7
- Eagle Tree Buffer of 330ft
- Existing & Rebuilt Roads
- F.S. Roads Under Construction
- Post-Field Proposed Roads
- Ahmu-Class 1 & Stream Chantypes
- Ahmu-Class 2 & Stream Chantypes
- Ahmu-Class 3 & Stream Chantypes
- Channel Type Change

- Lakes and Ponds
- Second Growth Units
- MMI 4
- McGilvery > 41
- Landings
- Stream & Lake NoCUT Buffers

.5 MILE

August 09, 1994

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

| | | | |
|--|---|---------------------------------------|--------------------------|
| VCU #: 577 | UNIT #: 423 | QUARTER QUAD: D4SE | PHOTO YR/#: 1991/1190-59 |
| ACRES: 34.8 | VOL.: 955.5 MBF | LOGGING SYSTEM: Shovel | |
| LANDSCAPE ZONE: Unit is in Goshawk Post-Fledging Area. | | | |
| Timber/Vegetation | Field Review: M. Case, 7/30/93 | Office Review: J. Goering | |
| Species composition includes hemlock, spruce, and cedar. Regeneration predominantly hemlock but includes a few cedar and spruce. Good advanced regeneration (candidate for release) consisting of hemlock and spruce in the north and eastern portions. Stand surrounded by ponds and streams. Beaver pond to the northwest of the unit. River present to the west. Possible riparian soils present in the northwest portion of the unit. | | | |
| Logging/Transportation | Field Review: K. Martin/B. Flatz, 7/31/93 | Office Review: K. Martin | |
| Unit is accessed by Road #69-81-28.3 and two spurs. Shovel log entire unit. Partial cut is feasible. Blowdown is possible in TTRA buffers. The unit is virtually surrounded by 100 foot stream buffers. Very good economics. | | | |
| Watershed/Fisheries | Field Review: B. Romey, 7/23/93 | Office Review: J. Knutzen | |
| Streams on north and west need 100' TTRA buffers. Lake is a Class 1 lake and needs a 100' plus 400' selective harvest buffer. | | | |
| Soils/Geology | Field Review: M. Minnillo, 7/23/93 | Office Review: J. Knutzen | |
| Low slopes. Portions of unit are wet slope, but no notches or signs of instability. Windthrow is minimal. | | | |
| Wildlife | Field Review: M. Minnillo, 7/23/93 | Office Review: M. Hall | |
| Recommend bald eagle nest survey along Class I stream (Logjam Creek) on the west side of unit prior to harvest. Some quality Goshawk habitat. Recommend survey prior to harvest. Recommend leaving a patch of trees in west central portion of unit in the split of proposed spur roads. Many large snags in this area and moderate deer/bear sign. Structures will be left around unit boundary in stream and lake buffers. Retain Level 1 structure. Unit is within preliminarily designated Goshawk PFA. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit not seen from any priority travel route or use area. | | | |
| Cultural/Lands | Field Review: D. Putnam, 7/31/93 | Office Review: T.W. Greiser | |
| Cultural - Unit partially or completely within high probability area for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Original unit split in two to meet Goshawk PFA Guidelines (new unit is 577-437, deferred for this entry). Recommend bald eagle survey along Logjam Creek. Maintain 100' buffers from streams and lake edges. 400' selective harvest buffers required around lake removes most merchantable timber from harvest. Type I for selective harvest. Type A in remainder of unit. New south unit boundary will need to be flagged during final layout. Mitigation measures for this unit are as follows: F5, F10, W2, W5, and W9. | | | |

NO UNIT MAP
UNIT DROPPED OR DEFERRED

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

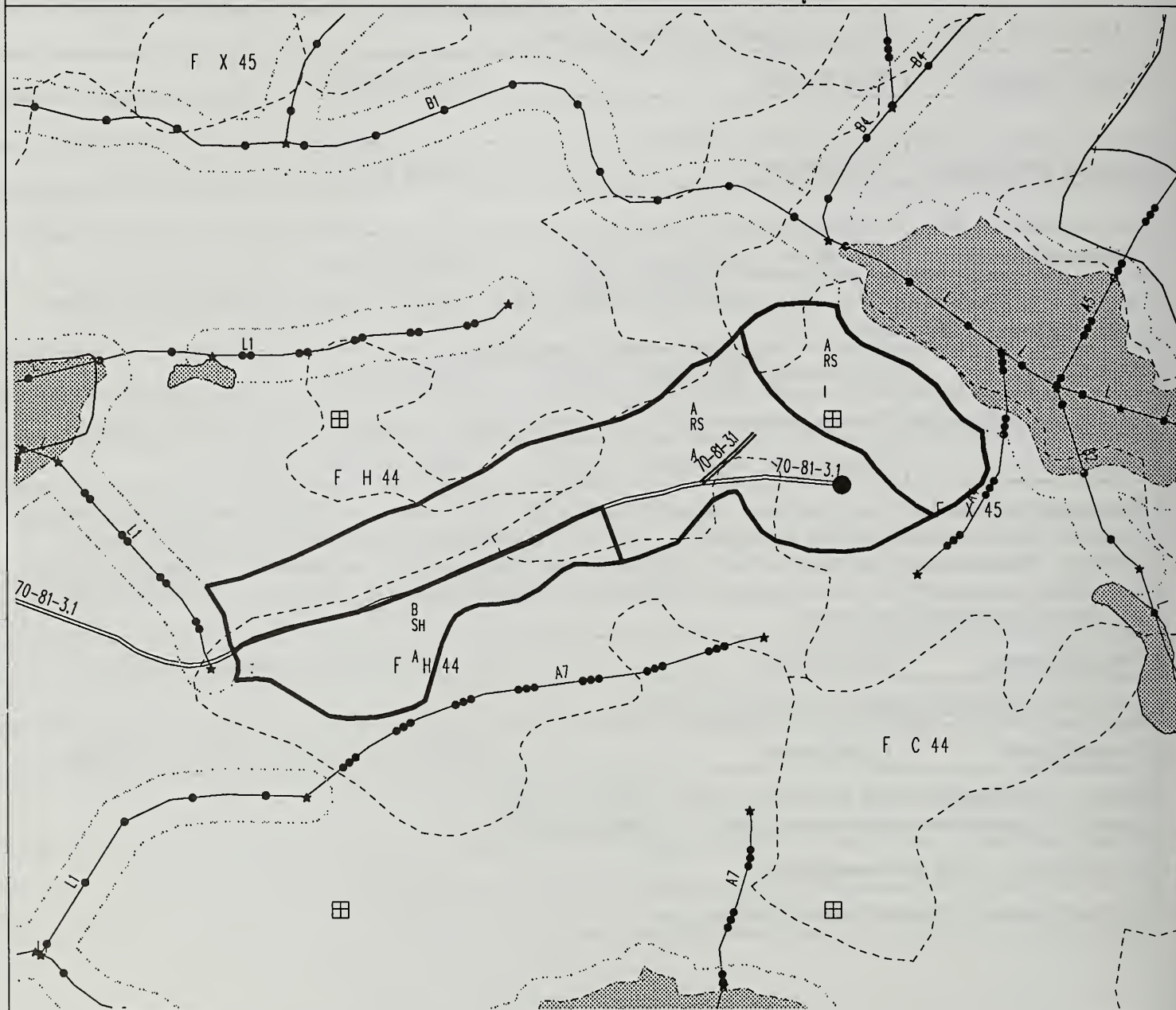
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|---|------------------------------------|---|-----------------------------|
| VCU #: 577 | UNIT #: 424 | QUARTER QUAD: D4SE | PHOTO YR/#: 1991/11-1190-59 |
| ACRES: | VOL.: | LOGGING SYSTEM: | |
| LANDSCAPE ZONE: Unit is in Goshawk Post-Fledgling Area. | | | |
| Timber/Vegetation | Field Review: | Office Review: | |
| | | | |
| Logging/Transportation | Field Review: | Office Review: | |
| | | | |
| Watershed/Fisheries | Field Review: B. Romey, 7/23/93 | Office Review: | |
| Streams 1, 2, 3, and 4 are B/W, Class I and IIa, 100' TTRA buffer. Stream 5 is a lake, B/W Class I, 100' to 400' selective harvest, TTRA buffer. | | | |
| Soils/Geology | Field Review: M. Minnillo, 7/23/93 | Office Review: | |
| Low slopes, but east side of unit is predominantly wet site. Partial suspension required on eastern half of unit. | | | |
| Wildlife | Field Review: M. Minnillo, 7/23/93 | Office Review: M. Hall | |
| Retain East unit boundary away from beaver slough and add a 150' select harvest prescription to stream buffer (east side of unit) to help maintain integrity of stream buffer. This will also retain high use travel cover/corridor and retain structure. Goshawk heard near center of unit. High beaver use in unit and along east boundary. Level 2 structure due to proximity to large HCC's. Unit is adjacent to goshawk nest and is within designated "nest area" and within the preliminarily designated goshawk PFA. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit not seen from any priority travel route or use area. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Deferred because it is within Goshawk nest site area. | | | |

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

VCU : 577

UNIT : 425

QUAD : D3-SW



- Revised Control Lake Project Boundary
- Post-Field Unit Boundary w/ Setting Codes
- Other Post-Field Unit Boundaries
- USFS Timber Types for Volc 4-7
- Eagle Tree Buffer of 330ft
- Existing & Rebuilt Roads
- F.S. Roads Under Construction
- Post-Field Proposed Roads
- Ahmu-Class 1 & Stream Chantypes
- Ahmu-Class 2 & Stream Chantypes
- Ahmu-Class 3 & Stream Chantypes
- Channel Type Change

- Lakes and Ponds
- Second Growth Units
- MMI 4
- McGilvery > 41
- Landings
- Stream & Lake NoCUT Buffers

May 16, 1994

0.5 MILE

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

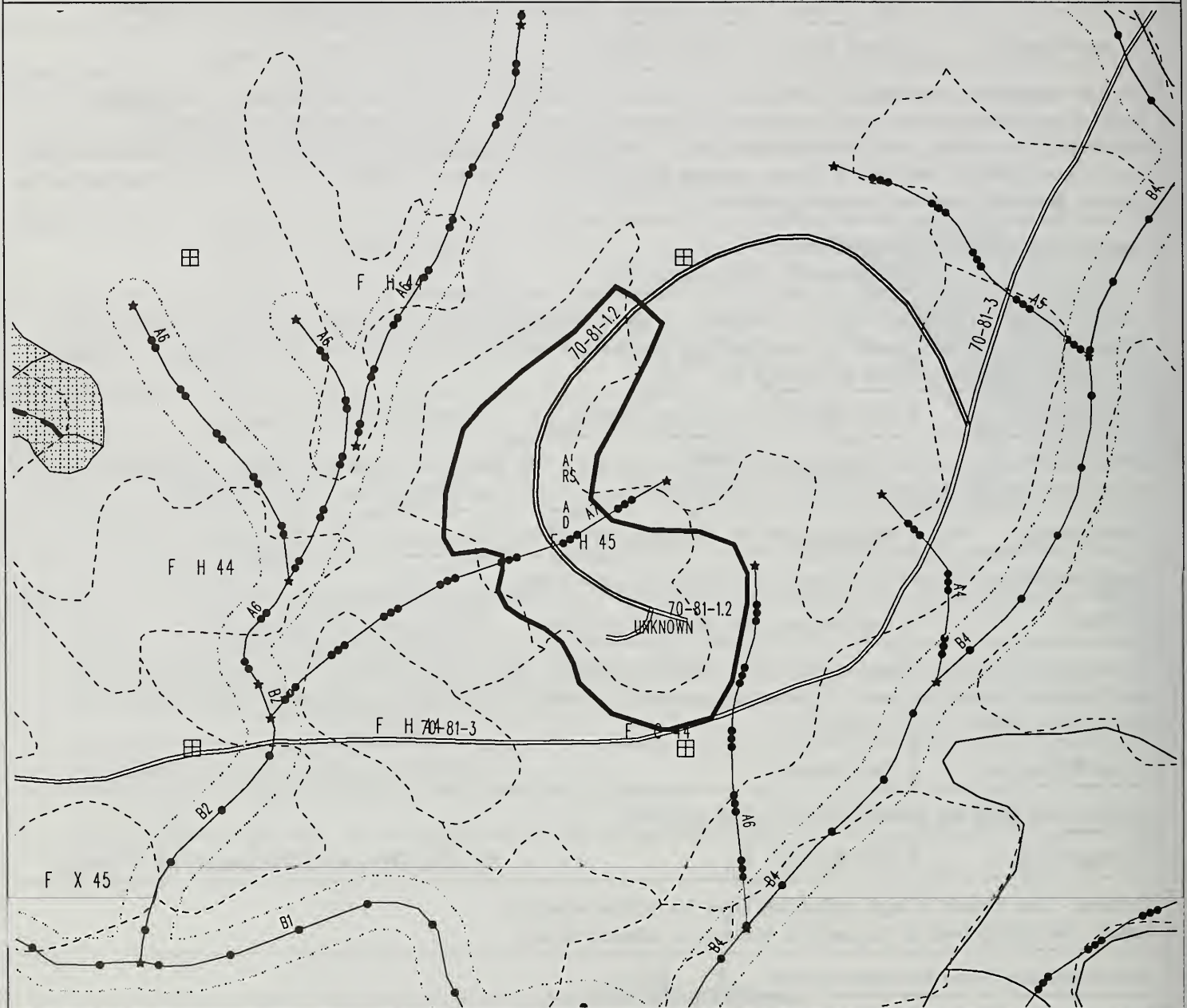
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|---|---|---|--------------------------|
| VCU #: 577 | UNIT #: 425 | QUARTER QUAD: D3SW | PHOTO YR/#: 1991/890-119 |
| ACRES: 46.7 | VOL.: 625.1 MBF | LOGGING SYSTEM: Shovel, Swingyarder/Running Skyline | |
| LANDSCAPE ZONE: Upper Logjam Creek Watershed. North 10% of unit is within Goshawk PFA Corridor. | | | |
| Timber/Vegetation | Field Review: J. Miller, 8/4/93 | Office Review: J. Goering | |
| Species composition predominantly hemlock and cedar but a few spruce are present. Regeneration predominantly hemlock but includes a few cedar and spruce. Regeneration was light to poor in the western half of the unit. Moderately low volume, multi-canopy stand with < 50% canopy closure and lower site productivity in the western half. Low volume south of the Class III stream running through the unit. Shelterwood/partial retention or seed tree harvest in order to promote spruce and cedar regeneration. | | | |
| Logging/Transportation | Field Review: T. Wetzel/D. Foster, 8/04/93 | Office Review: E. Urstadt | |
| Unit is accessed by Road # 70-81-3.1. Recommend shovel logging SW strip and swing yarding the remainder using running skyline. Ninety percent of swing yarding is uphill. A 100 foot stream buffer is along lake on NW tip. Good economics. Tailholds and guy stumps are fair. | | | |
| Watershed/Fisheries | Field Review: B. Romey, 7/29/93 | Office Review: T. Stewart | |
| Stream northeast of unit is a Class I, 100' TTRA buffer and a 400' selective harvest zone (lake). Streams south and east of unit are Class III, G/W (none hung). Directionally fall trees into unit along stream at eastern boundary. | | | |
| Soils/Geology | Field Review: M. Minnillo, 7/29/93 | Office Review: T. Stewart | |
| Partial suspension required in the east half of unit due to wet slopes. | | | |
| Wildlife | Field Review: M. Minnillo, 7/29/93 | Office Review: M. Hall | |
| Require partial cutting northeast end of unit within 500' of lake. This will also maintain some cover for heavily used deer/bear/wolf/water fowl area. Surveyed for murrelets - presence confirmed. Murrelet eggs found in muskeg edge, to west of unit. Retain Level 1 structure. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit not seen from any priority travel route or use area. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Directionally fall trees where boundary approaches Class III streams. Type A clearcut with single tree (up to 50% of volume) in selective cut lake buffer at east end - small groups, Type I. Partial suspension required in east half. Mitigation measures in main part of unit are: F5, F6, F8, F10, W2, and W5. | | | |

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

VCU : 577

UNIT : 426

QUAD : D3-SW



- Revised Control Lake Project Boundary
- Post-Field Unit Boundary w/ Setting Codes
- Other Post-Field Unit Boundaries
- USFS Timber Types for Valc 4-7
- Eagle Tree Buffer of 330ft
- Existing & Rebuilt Roads
- F.S. Roads Under Construction
- Post-Field Proposed Roads
- Ahmu-Class 1 & Stream Chantypes
- Ahmu-Class 2 & Stream Chantypes
- Ahmu-Class 3 & Stream Chantypes
- Channel Type Change

- Lakes and Ponds
- Second Growth Units
- MMI 4
- McGilvery > 41
- Landings
- Stream & Lake NoCUT Buffers

May 16, 1994

.5 MILE

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

| | | | |
|--|---|---|-------------------------|
| VCU #: 577 | UNIT #: 426 | QUARTER QUAD: D3SW | PHOTO YR/#: 1991/990-49 |
| ACRES: 25.7 | VOL.: 596.9 MBF | LOGGING SYSTEM: Swingyarder/Running Skyline | |
| LANDSCAPE ZONE: Unit is within Goshawk PFA Corridor. | | | |
| Timber/Vegetation | Field Review: S. Karstens, 8/10/93 | Office Review: J. Goering | |
| Species composition predominantly hemlock but includes cedar and some spruce. Regeneration predominantly hemlock but includes spruce. Low to moderate amounts of mistletoe infection evident in canopy and advanced regeneration. A few rock bluffs on the higher elevations of the unit. Salmonberry present in the southern portion of the unit associated with the stream. Poor soil drainage in the southern portion of the unit. Harvest all mistletoe infected hemlock and cut infected regeneration. | | | |
| Logging/Transportation | Field Review: T. Wetzel/D. Foster, 8/09/93 | Office Review: E. Ustadt | |
| Unit is accessed by Road #70-81-1.2. Swing yard entire unit. Seventy percent uphill yarding. Partial suspension is possible on the north part of unit. A blind lead area on the SW boundary was excluded (wildlife area). Verify stream class on SE unit boundary during final layout. | | | |
| Watershed/Fisheries | Field Review: B. Romey, 7/30/93 | Office Review: T. Stewart | |
| Stream in center of unit is a Class III, O/W, split yard, directional fall. | | | |
| Soils/Geology | Field Review: M. Minnillo, 7/30/93 | Office Review: T. Stewart | |
| Low to moderate slopes. Follow fisheries split yard requirement on Class III notch. No other concerns. | | | |
| Wildlife | Field Review: M. Minnillo, 7/30/93 | Office Review: M. Hall | |
| Recommend no harvest; high use deer/bear habitat (above 700') on knob at top of unit. Retain Level 1 structure. Woodpeckers heard and observed. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit not seen from any priority travel route or use area. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | Reviewed By: | |
| Directionally fall and split yard Class III stream in unit and on southeast side. Use caution around small pond on southeast corner of unit. Minimize disturbance if possible in salmonberry area in south end of unit to avoid possible brushfield. Type A clearcut. Partial cutting not attractive due to blowdown potential and mistletoe infection in advanced regeneration. Three- to four-acre blind lead left in southwest corner of unit which could be taken in future (not isolated). Type D. Mitigation measures for this unit are as follows: F6, F8, F10, W1, and W5. | | | |

NO UNIT MAP
UNIT DROPPED OR DEFERRED

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

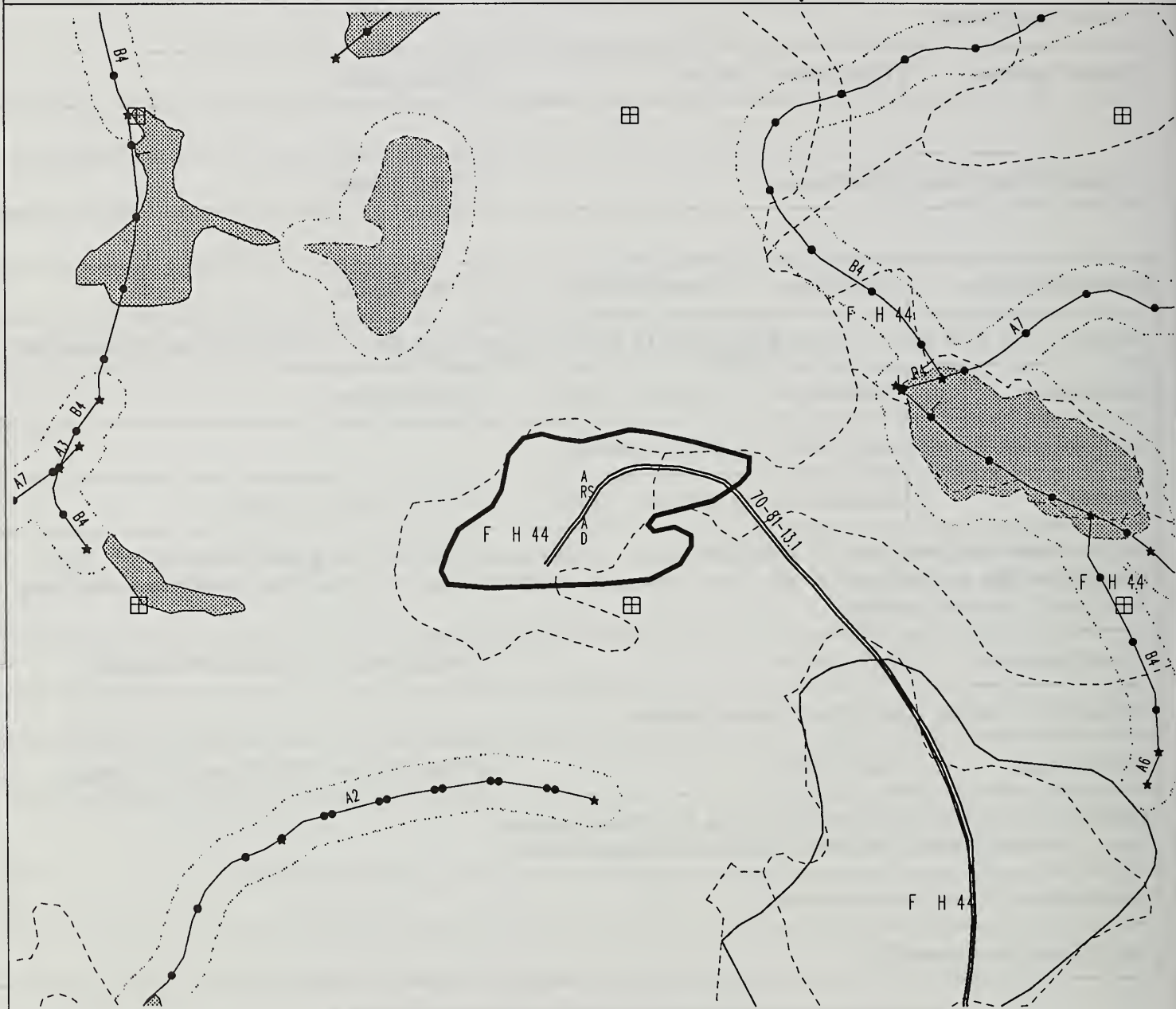
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| ACRES: | VOL.: | LOGGING SYSTEM: | |
| LANDSCAPE ZONE: | | | |
| Timber/Vegetation | Field Review: 8/5/93 | Office Review: | |
| | | | |
| Logging/Transportation | Field Review: | Office Review: | |
| | | | |
| Watershed/Fisheries | Field Review: B. Romey, 7/30/93 | Office Review: | |
| Streams 1, 2, & 4 are Class I, flagged B/W, 100' TTRA buffers. Stream 3 is Class III, O/W, split yard, directional fall. | | | |
| Soils/Geology | Field Review: M. Minnillo, 7/30/93 | Office Review: | |
| Split yard notch through center of unit. No stability concerns. | | | |
| Wildlife | Field Review: M. Minnillo, 7/30/93 | Office Review: M. Hall | |
| High use water fowl, deer, bear and wolf habitat colony. Southern end of unit and along lake to south of unit. High potential wolf den area evidenced by kills, tracks, and scat. Follow fisheries, lake prescription of select harvesting along lake; Level 1 structure retention. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit not seen from any priority travel route or use area. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Unit deferred due to non-CFL. | | | |













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


VCU : 577

UNIT : 428

QUAD : D3-SW



-  Revised Control Lake Project Boundary
-  Post-Field Unit Boundary w/ Setting Codes
-  Other Post-Field Unit Boundaries
-  USFS Timber Types for Volc 4-7
-  Eagle Tree Buffer of 330ft
-  Existing & Rebuilt Roads
-  F.S. Roads Under Construction
-  Post-Field Proposed Roads
-  Ahmu-Class 1 & Stream Chantypes
-  Ahmu-Class 2 & Stream Chantypes
-  Ahmu-Class 3 & Stream Chantypes
-  Channel Type Change

-  Lakes and Ponds
 Second Growth Units
 MMI 4
 McGilvery > 41
 Landings
 Stream & Lake NoCUT Buffers

May 16, 1994

.5 MILE

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

| | | | |
|--|--|---|-------------------------|
| VCU #: 577 | UNIT #: 428 | QUARTER QUAD: D3SW | PHOTO YR/#: 1991/990-47 |
| ACRES: 12.4 | VOL.: 277.8 MBF | LOGGING SYSTEM: Swingyarder/Running Skyline | |
| LANDSCAPE ZONE: Unit is located within Logjam Creek watershed and is on the edge of the Honker Divide watershed. | | | |
| Timber/Vegetation | Field Review: S. Karstens, 7/12/93 | Office Review: J. Goering | |
| Species composition predominantly hemlock but includes cedar and some spruce. Regeneration mostly on nurse logs and consists of hemlock and a few cedar. Muskeg incursions incorporated with mixed species, low volume timber in some areas of the eastern half. | | | |
| Logging/Transportation | Field Review: T. Wetzel/G. Slawson, 7/12/93 | Office Review: J. Doyal | |
| Unit is accessed by Road # 70-81-13.1. Recommend swing yarding with running skyline using grapples. Seventy five percent is uphill yarding. Partial cut is feasible in portions of the unit. Tailholds may require artificial anchors such as tie-backs. Fair economics. | | | |
| Watershed/Fisheries | Field Review: B. Romey, 7/09/93 | Office Review: T. Stewart | |
| No streams within unit. Don't move unit boundary toward lake on east side. | | | |
| Soils/Geology | Field Review: M. Minnillo, 7/09/93 | Office Review: T. Stewart | |
| No instability concerns. | | | |
| Wildlife | Field Review: M. Minnillo, 7/09/93 | Office Review: M. Hall | |
| Deer and bear sign present but not abundant. Timber cruiser heard wolves howling near unit. Retain Level 2 structure due to large surrounding area of naturally fragmented land. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit not seen from any priority travel route or use area. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| East side of unit is scrubby with more snags and mountain hemlock. Type A clearcut, but utilize east area to retain snag patches and small live trees (< 15" DBH) - Type D. Mitigation measures for this unit are as follows: F8, W1, and W5. | | | |













CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD







VCU : 577

UNIT : 429

QUAD : D3-SW



-  Revised Control Lake Project Boundary
-  Post-Field Unit Boundary w/ Setting Codes
-  Other Post-Field Unit Boundaries
-  USFS Timber Types for Volc 4-7
-  Eagle Tree Buffer of 330ft
-  Existing & Rebuilt Roads
-  F.S. Roads Under Construction
-  Post-Field Proposed Roads
-  Ahmu-Class 1 & Stream Chantypes
-  Ahmu-Class 2 & Stream Chantypes
-  Ahmu-Class 3 & Stream Chantypes
-  Channel Type Change

-  Lakes and Ponds
 Second Growth Units
 MMI 4
 McGilvery > 41
 Landings
 Stream & Lake NoCUT Buffers

August 03, 1994

.5 MILE

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

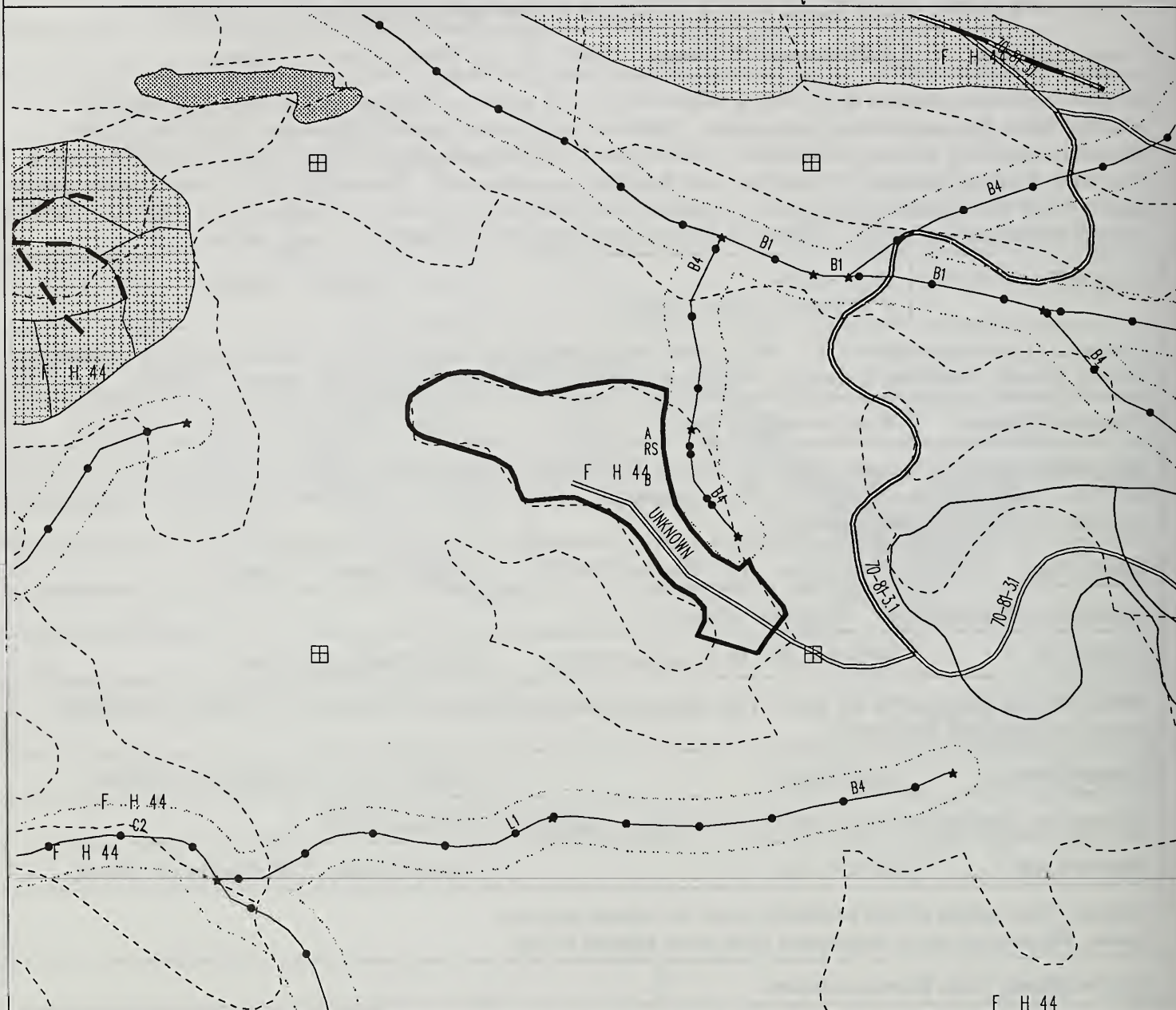
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| ACRES: 27.8 | VOL.: 546.8 MBF | LOGGING SYSTEM: Swingyarder/Running Skyline | |
| LANDSCAPE ZONE: Unit is located within goshawk PFA corridor and upper Logjam Creek watershed. | | | |
| Timber/Vegetation | Field Review: B. Hasebe, 7/31/93 | Office Review: J. Goering | |
| Species composition predominantly hemlock and cedar but a few spruce are present. Regeneration predominantly hemlock with a few spruce but is lacking cedar. Moderately low volume, multi-canopy stand with < 50% canopy closure and relatively low site productivity. Light amount of mistletoe infection evident in canopy in middle portion of the stand. Relatively shallow soils, and poor soil drainage areas within unit. Saturation/stability concern on the eastern slope. Fairly dense understory vegetation. Promote spruce and cedar regeneration and minimize soil disturbance through seedtree or shelterwood harvest. Harvest all mistletoe infected hemlock. Windthrow concern minimal. | | | |
| Logging/Transportation | Field Review: T. Wetzel/D. Foster, 8/02/93 | Office Review: E. Urstadt | |
| Unit is accessed by Road #70-81-3.1. Recommend swing yarding with running skyline. Partial suspension is possible on 80% of the unit. Partial cut is feasible. The NE boundary has a 100 foot stream buffer. Good economics. | | | |
| Watershed/Fisheries | Field Review: B. Romey, 7/29/93 | Office Review: T. Stewart | |
| Lake located directly to the east of the unit. Provide 100' harvest buffer and 400' selective cut buffer. Streams 2 and 3 are Class I, B/W - require 100' TTRA buffer. Stream 1 is a Class IIa, B/W - require 100' TTRA buffer. Stream 1a is a Class IIb, O/W - use as unit boundary. | | | |
| Soils/Geology | Field Review: M. Minnillo, 7/29/93 | Office Review: T. Stewart | |
| Gentle slope throughout unit. No stability concerns. | | | |
| Wildlife | Field Review: M. Minnillo, 7/29/93 | Office Review: M. Hall | |
| Much bear sign above unit to the south. Lake along northeast unit boundary. Retain Level 1 structure; stream/lake buffers will help meet this level. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit not seen from any priority travel route or use area. Maximum Modification VQO. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| 100' of no harvest and 400' selective harvest buffer on lake. Streams at southeast and northeast edges of unit require 100' buffers. Stream along northeast edge also requires additional 50' selective harvest buffer though boundary is probably greater than 150' from stream. Type E overstory removal leaving 14" DBH and below with care to protect advanced regeneration where possible. Type I harvest in selective zone around lake. Stand is windfirm and has little mistletoe. Mitigation measures for this unit are as follows: F5, F8, F10, W2, and W11. | | | |

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

VCU : 577

UNIT : 430

QUAD : D3-SW



- Revised Control Lake Project Boundary
- Post-Field Unit Boundary w/ Setting Codes
- Other Post-Field Unit Boundaries
- USFS Timber Types for Volc 4-7
- Eagle Tree Buffer of 330ft
- Existing & Rebuilt Roads
- F.S. Roads Under Construction
- Post-Field Proposed Roads
- Ahmu-Class 1 & Stream Chantypes
- Ahmu-Class 2 & Stream Chantypes
- Ahmu-Class 3 & Stream Chantypes
- Channel Type Change

- Lakes and Ponds
- Second Growth Units
- MMI 4
- McGilvery > 41
- Landings
- Stream & Lake NoCUT Buffers

August 03, 1994

.5 MILE

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

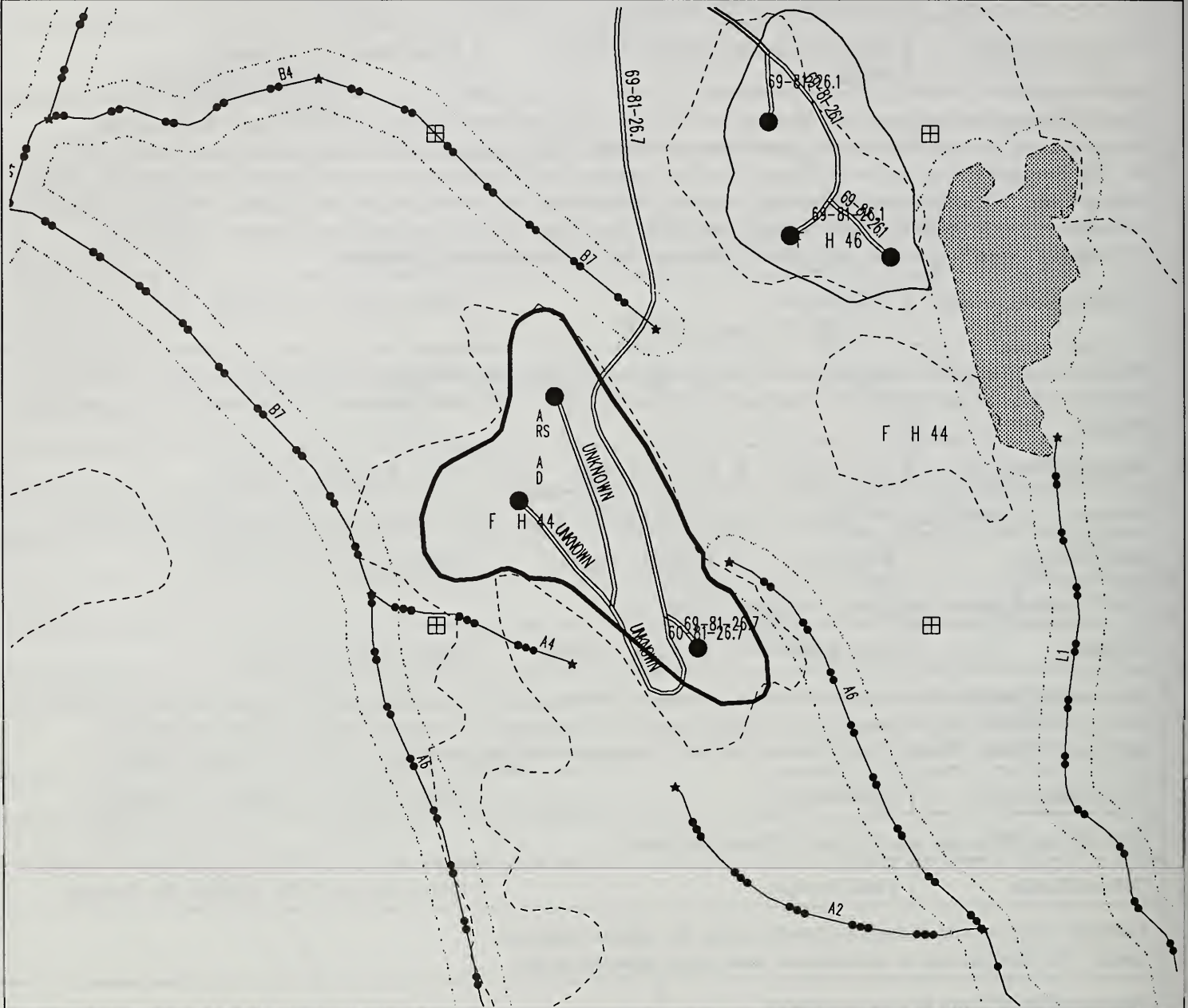
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|--|---|---|--------------------------|
| VCU #: 577 | UNIT #: 430 | QUARTER QUAD: D3SW | PHOTO YR/#: 1991/890-119 |
| ACRES: 13.4 | VOL.: 111.6 MBF | LOGGING SYSTEM: Running Skyline | |
| LANDSCAPE ZONE: Unit in Goshawk PFA Corridor. | | | |
| Timber/Vegetation | Field Review: G. Hedin/J. Goering, 8/2/93 | Office Review: J. Goering | |
| Species composition predominantly hemlock but includes cedar and some spruce in northern half. Regeneration predominantly hemlock but includes some cedar and spruce. <u>Low volume</u> , multi-species, multi-canopy stand with < 50% canopy closure and low site productivity in southern half. Many rock outcrops, fissures, and boulders. Shallow soils present. Unit wraps around muskeg incursion incorporated with mixed species, low volume timber. Northern half consisted of moderate to low volume timber on fairly steep slope with shallow soils over bedrock. Recommend consideration of northern half as a cable or helicopter unit for proportionality purposes. | | | |
| Logging/Transportation | Field Review: T. Wetzel/D. Foster, 8/03/93 | Office Review: K. Martin | |
| Unit had road flagged to muskeg at top of hill (southwest of unit). The maximum volume per acre found was 5 MBF/acre of poor quality timber. Road and unit is not flagged. Very poor economics. Recommend leaving area for wildlife. | | | |
| Watershed/Fisheries | Field Review: B. Romey, 7/29/93 | Office Review: T. Stewart | |
| Stream 1 is a Class IIb, O/W. Lay out boundary as on paper plan. Class I stream to south not near unit boundary. | | | |
| Soils/Geology | Field Review: M. Minnillo, 7/29/93 | Office Review: T. Stewart | |
| Small bluffs in north side of unit. No stability concerns. | | | |
| Wildlife | Field Review: M. Minnillo, 7/29/93 | Office Review: M. Hall | |
| Recommend partial cutting entire unit due to amount of muskeg in and around unit which is highly traveled by deer and bear. Also bluffs and overhangs in north side of unit have been used by bear/deer for beds. Bear den found on northwest hillside. Retain Level 2 due to naturally fragmented and harvested matrix within which unit located. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit not seen from any priority travel route or use area. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Maintain 100' buffer on Class II stream to northeast. Type B clearcut. Leave non-merchantable where possible. Unit boundary not flagged in field. Road flagged to unit boundary. Mitigation measures for this unit include: F4, F5, F8, F10, and W4. | | | |

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

VCU : 577

UNIT : 431

QUAD : D3-SW



- Revised Control Lake Project Boundary
- Post-Field Unit Boundary w/ Setting Codes
- Other Post-Field Unit Boundaries
- USFS Timber Types for Volc 4-7
- Eagle Tree Buffer of 330ft
- Existing & Rebuilt Roads
- F.S. Roads Under Construction
- Post-Field Proposed Roads
- Ahmu-Class 1 & Stream Chantypes
- Ahmu-Class 2 & Stream Chantypes
- Ahmu-Class 3 & Stream Chantypes
- Channel Type Change

- Lakes and Ponds
- Second Growth Units
- MMI 4
- McGilvery > 41
- Landings
- Stream & Lake NoCUT Buffers

May 16, 1994

.5 MILE

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

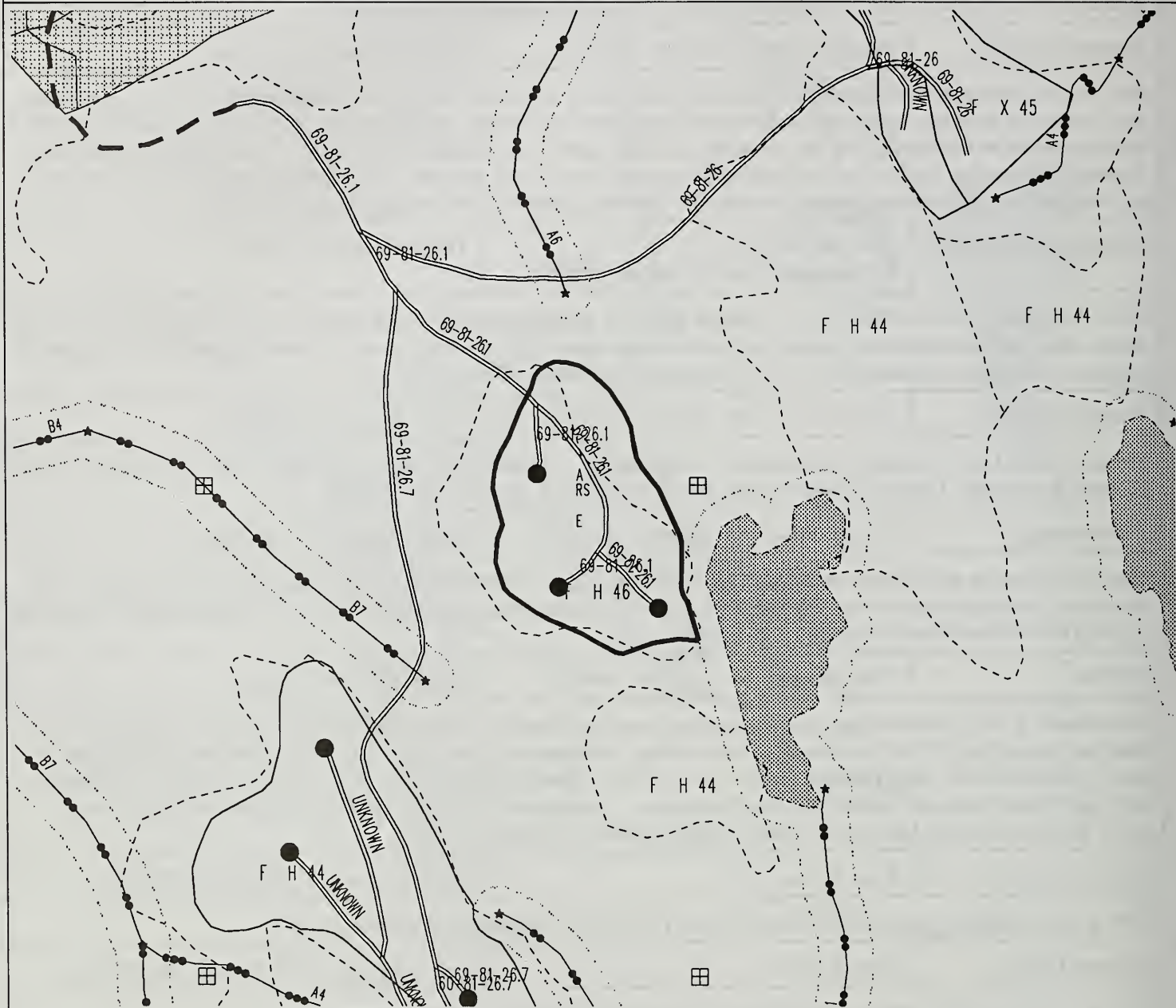
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|---|---|---|--------------------------|
| VCU #: 577 | UNIT #: 431 | QUARTER QUAD: D3SW | PHOTO YR/#: 1991/890-116 |
| ACRES: 22.4 | VOL.: 424.5 MBF | LOGGING SYSTEM: Swingyarder/Running Skyline | |
| LANDSCAPE ZONE: Unit is located northwest of, but not in proposed Honker Block. | | | |
| Timber/Vegetation | Field Review: T. Stecher, 8/25/93 | Office Review: J. Goering | |
| Species composition predominantly hemlock but includes 20% cedar and 7% spruce. Regeneration mostly on nurse logs and consists of hemlock, spruce and a few cedar. Moderate-low volume, mixed species, multi-canopy stand with < 50% canopy closure and relatively low site productivity. Fairly poor soil drainage areas present. Poor regeneration and non-vigorous or decaying trees in the west-central portion due to poor soil drainage. Recommend cable yarding to minimize soil compaction. Exclude west-central portion from harvest. Mapped low site index soil not observed. | | | |
| Logging/Transportation | Field Review: K. Martin/B. Flatz/D. Keister, 8/26/93 | Office Review: K. Jehnke | |
| Unit is accessed by Road #69-81-26.7. Another road was flagged from SW (Road #69-81-34). This road was abandoned due to slides and unstable soils. Swing yard unit using running skyline. Spurs have not been flagged in field. Southern portion of unit was eliminated due to lack of merchantable timber. Fair economics. | | | |
| Watershed/Fisheries | Field Review: M. Minnillo, 8/10/93 | Office Review: T. Stewart | |
| Streams mapped to the northeast, southeast and south-central are muskeg drainages. Stream on west side of unit is Class III muskeg channel. Class III in west-central unit is also muskeg channel. No concern. | | | |
| Soils/Geology | Field Review: M. Minnillo, 8/10/93 | Office Review: T. Stewart | |
| Southeast corner at unit need to be adjusted to avoid steep slopes. West boundary to be maintained above muskegs and wet slopes. Recommend deleting southern half of unit due to moderate steep and wet slopes. Partial suspension required in south half of unit if not deleted. | | | |
| Wildlife | Field Review: M. Minnillo, 8/10/93 | Office Review: M. Hall | |
| Recommend a 150' select harvest prescription along west unit boundary along muskeg in order to leave some cover for deer/bear since Unit 577-432 is directly across muskeg. Recommend using road at west unit boundary in south half of unit to maintain cover along riparian corridor west of unit. Moderate deer use in unit; good cover/forage. Muskeg on east side of unit is heavily traveled by deer/bear/wolves - recommend 150' select harvest along this muskeg. Retain Level 2 structure due to large area of natural fragmentation and harvest in matrix | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit is not visible from any priority travel routes or use areas. Maximum modification VQO. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Avoid Class II channels to north and east (not in unit). Unstable part of unit excluded. Partial suspension not required. Type A clearcut and Type D with leave island in west-central poor regeneration area. Mitigation measures for this unit are as follows: F1, F4, F8, W1, and W5. | | | |













CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD







VCU : 577

UNIT : 432

QUAD : D3-SW



-  Revised Control Lake Project Boundary
-  Post-Field Unit Boundary w/ Setting Codes
-  Other Post-Field Unit Boundaries
-  USFS Timber Types for Volc 4-7
-  Eagle Tree Buffer of 330ft
-  Existing & Rebuilt Roads
-  F.S. Roads Under Construction
-  Post-Field Proposed Roads
-  Ahmu-Class 1 & Stream Chantypes
-  Ahmu-Class 2 & Stream Chantypes
-  Ahmu-Class 3 & Stream Chantypes
-  Channel Type Change

-  Lakes and Ponds
 Second Growth Units
 MMI 4
 McGilvery > 41
 Landings
 Stream & Lake NoCUT Buffers

May 16, 1994

.5 MILE

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

| | | | |
|--|--|---|--------------------------|
| VCU #: 577 | UNIT #: 432 | QUARTER QUAD: D3SW | PHOTO YR/#: 1991/890-116 |
| ACRES: 15.1 | VOL.: 252.6 MBF | LOGGING SYSTEM: Swingyard/Running Skyline | |
| LANDSCAPE ZONE: Unit is northwest of proposed Honker Divide HCA. | | | |
| Timber/Vegetation | Field Review: J. Miller, 8/18/93 | Office Review: J. Goering | |
| Species composition predominantly hemlock with cedar but a few spruce are present. Regeneration predominantly hemlock but includes a few spruce, and cedar in the northern section. Alaska yellow cedar decline evident on the southern slopes. Fair to poorly drained soils in areas of the southern half in proximity of the lake. Stand appears windfirm and feasible for partial retention harvests. Promote spruce and cedar regeneration through shelterwood or seed tree harvest. | | | |
| Logging/Transportation | Field Review: E. Urstadt/J. Herzberg, 8/18/93 | Office Review: K. Jehnke | |
| Unit is accessed by Road #69-81-26.1. Two spurs are in unit. This unit can be partial cut. Verify suspension in SE corner during final layout with profiles. Tailholds will be needed (on the south line). Tie-backs or an equipment anchor should work. There is a 100 foot buffer on the SE boundary. The south half of the unit was dropped due to low volume and very poor economics. Fair economics for the remainder of the unit. Partial suspension is possible. | | | |
| Watershed/Fisheries | Field Review: J. Metzler, 8/10/93 | Office Review: T. Stewart | |
| A Class IIa lake, approximately 15 acres, is located east of the unit. It requires a 100' no-cut buffer. There are no streams in the unit. | | | |
| Soils/Geology | Field Review: J. Metzler, 8/10/93 | Office Review: T. Stewart | |
| Slopes are 50% to 70% and there is some evidence of soil creep and a small slump in the unit. Partial suspension should be achieved throughout the unit. | | | |
| Wildlife | Field Review: M. Minnillo, 8/10/93 | Office Review: M. Hall | |
| Recommend deleting the southern half of unit due to proximity to high use large muskeg habitat and Unit 577-431. Snags will be retained along lake buffer. Low wildlife sign in unit. Active beaver pond to east of unit. High goose sign along pond on east of unit. Structure will be maintained in lake buffer. Muskeg is high use deer/bear/wolf habitat. Retain Level 2 structure due to matrix of natural fragmentation. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit is not visible from any priority travel routes or use areas. Maximum modification VQO. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Southern portion of original unit excluded due to non-CFL. Lake to east requires 100' no-cut buffer. Type E overstory removal - remove 17" and greater diameter trees. Leave smaller cedar to encourage regeneration. Many large spruce trees provide opportunity for small independent sale. Achieve partial suspension over entire unit. Mitigation measures for this unit are as follows: F5, F8, and W2. | | | |













CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD







VCU : 577

UNIT : 434

QUAD : D3-SW



-  Revised Control Lake Project Boundary
-  Post-Field Unit Boundary w/ Setting Codes
-  Other Post-Field Unit Boundaries
-  USFS Timber Types for Volc 4-7
-  Eagle Tree Buffer of 330ft
-  Existing & Rebuilt Roads
-  F.S. Roads Under Construction
-  Post-Field Proposed Roads
-  Ahmu-Class 1 & Stream Chantypes
-  Ahmu-Class 2 & Stream Chantypes
-  Ahmu-Class 3 & Stream Chantypes
-  Channel Type Change

-  Lakes and Ponds
 Second Growth Units
 MMI 4
 McGilvery > 41
 Landings
 Stream & Lake NoCUT Buffers

May 16, 1994

.5 MILE

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

| | | | |
|---|--|---|--------------------------|
| VCU #: 577 | UNIT #: 434 | QUARTER QUAD: D3SW | PHOTO YR/#: 1991/890-121 |
| ACRES: 43.9 | VOL.: 426.6 MBF | LOGGING SYSTEM: Swingyarder/Shovel Yarder | |
| LANDSCAPE ZONE: Unit is in Logjam Creek watershed. | | | |
| Timber/Vegetation | Field Review: B. Hasebe, 7/8/93 | Office Review: J. Goering | |
| <p>Species composition predominantly hemlock with cedar and lodgepole but a few spruce are present. Regeneration predominantly hemlock with some cedar and lodgepole. Few spruce are present. Moderately low volume, multi-species, multi-canopy stand with < 50% canopy closure and low site productivity. Little to no mistletoe evident in canopy. Fairly dense understory vegetation. Muskeg incursions incorporated with mixed species, low volume timber and Alaska yellow cedar decline evident. Promote regeneration and minimize soil compaction through shelterwood or seed tree harvest. Windthrow potential minimal. Consider removing unit from unit pool due to low quality and economic costs of harvest.</p> | | | |
| Logging/Transportation | Field Review: J. Doyal/ D. Keister/J. Herzberg, 7/07/93 | Office Review: E. Urstadt | |
| <p>Unit is accessed by Road #71-81-23.1 and 71-81-23.2. Shovel log SE setting. Swing yard with running skyline the remainder. Partial cut is possible. The NE boundary has a 200 foot stream buffer. Good economics.</p> | | | |
| Watershed/Fisheries | Field Review: B. Romey, 6/03/93 | Office Review: T. Stewart | |
| <p>Stream 1 needs 100' buffer plus 100' no programmed harvest buffer for a total 200' no harvest buffer.</p> | | | |
| Soils/Geology | Field Review: M. Minnillo, 6/30/93 | Office Review: T. Stewart | |
| <p>Low slopes; no stability problems.</p> | | | |
| Wildlife | Field Review: M. Minnillo, 6/30/93 | Office Review: M. Hall | |
| <p>High wolf use along Class I stream along the eastern unit boundary - three to four wolf kills along east boundary. Recommend eagle survey on stream along east boundary. Structure will be maintained with required stream buffer. Large muskeg complex west of unit. Retain Level 1 structure.</p> | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| <p>Unit not seen from any priority travel route or use area.</p> | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| <p>Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit.</p> | | | |
| Interdisciplinary Team Recommendations | | | |
| <p>Class I stream on east side requires 100' no-cut and 100' no programmed harvest for a total 200' no harvest buffer. Adjacent area contains large variety of structure. Type A clearcut. Ensure adequate slash mat for shovel yarding with predesignated skid roads. Mitigation measures for this unit are as follows: F5, F8, F10, and W5.</p> | | | |

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

VCU : 577

UNIT : 435

QUAD : D3-SW



- Revised Control Lake Project Boundary
- Post-Field Unit Boundary w/ Setting Codes
- Other Post-Field Unit Boundaries
- USFS Timber Types for Volc 4-7
- Eagle Tree Buffer of 330ft
- Existing & Rebuilt Roads
- F.S. Roads Under Construction
- Post-Field Proposed Roads
- Ahmu-Class 1 & Stream Chantypes
- Ahmu-Class 2 & Stream Chantypes
- Ahmu-Class 3 & Stream Chantypes
- Channel Type Change

- Lakes and Ponds
- Second Growth Units
- MMI 4
- McGilvery > 41
- Landings
- Stream & Lake NoCUT Buffers

May 16, 1994

.5 MILE

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

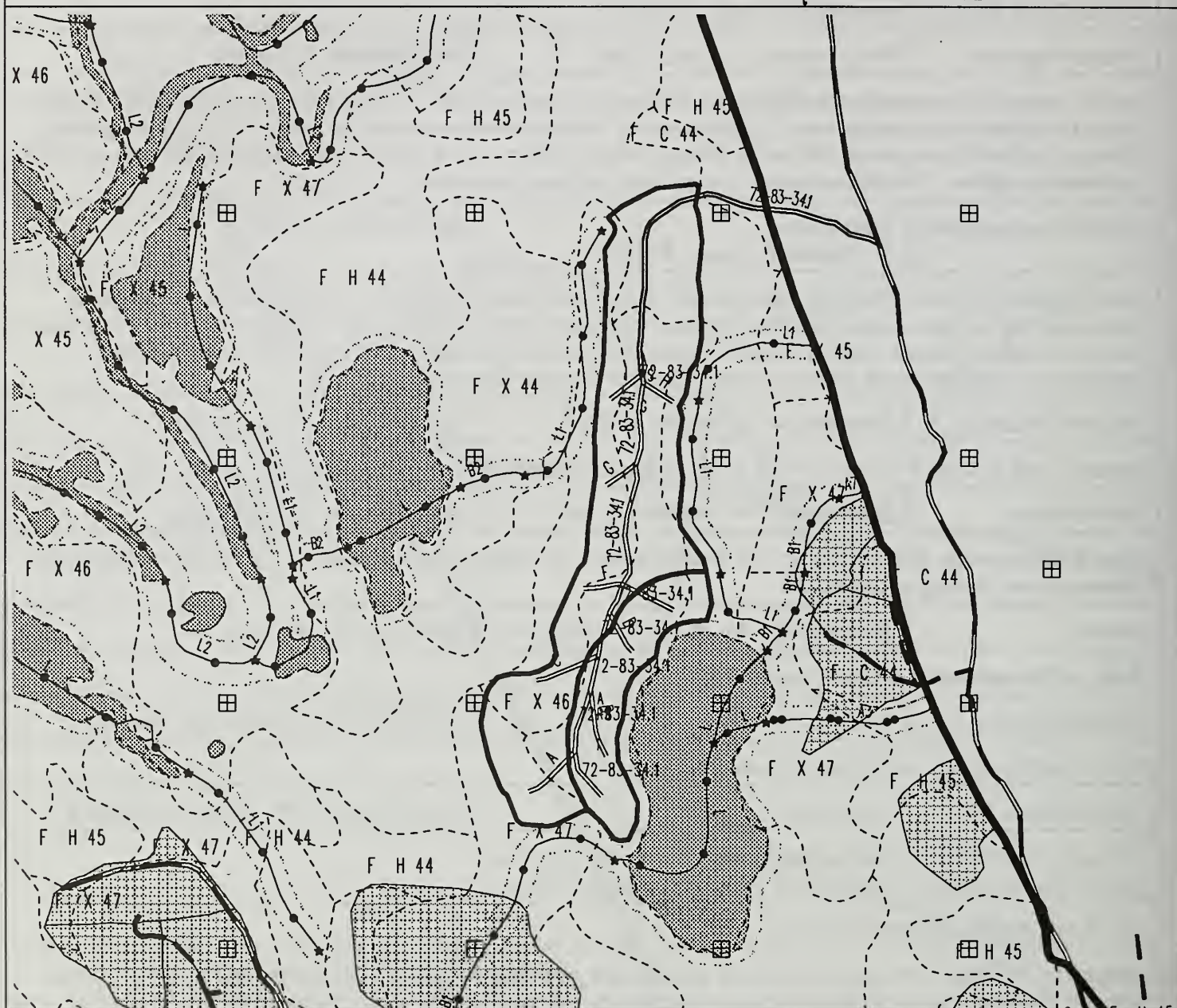
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|--|---|---|--------------------------|
| VCU #: 577 | UNIT #: 435 | QUARTER QUAD: D3SW | PHOTO YR/#: 1991/890-121 |
| ACRES: 45.2 | VOL.: 1201.5 MBF | LOGGING SYSTEM: Slackline | |
| LANDSCAPE ZONE: Unit in Logjam Creek watershed. | | | |
| Timber/Vegetation | Field Review: J. Miller, 7/16/93 | Office Review: J. Goering | |
| <p>Species composition predominantly hemlock but includes cedar and some spruce. Regeneration predominantly hemlock with a few spruce but is lacking cedar. Light amount of mistletoe infection evident in canopy in southeastern portion. Muskeg incursions incorporated with mixed species, lower volume timber in some areas. Poor soil drainage areas in the southwestern portion. Windthrow damage evident in the southwestern portion.</p> | | | |
| Logging/Transportation | Field Review: T. Wetzler, D. Foster, 8/25/93 | Office Review: J. Doyal | |
| <p>Unit is accessed by Road #70-81-16. Recommend 90 foot tower using slackline for downhill yarding (to maximize suspension) and shotgun yarding for uphill yarding. Sixty percent is downhill yarding. Tailholds are poor along south and east boundary; tie-backs may be needed. Partial cut is not recommended due to poor tailholds and minimal deflection. A 100 foot stream buffer is in the NE part of the unit. Fair economics.</p> | | | |
| Watershed/Fisheries | Field Review: B. Romey, 6/30/93 | Office Review: G. McNaughton | |
| Stream in unit is Class II below (100 foot no cut buffer) and Class III above (directionally fall and split yard). | | | |
| Soils/Geology | Field Review: M. Minnillo, 6/30/93 | Office Review: G. McNaughton | |
| Some limestone below unit, but not of cave forming purity. No stability problems in unit. Recommend at least partial suspension over muskeg in central unit. | | | |
| Wildlife | Field Review: M. Minnillo, 6/30/93 | Office Review: M. Hall | |
| Snags will be maintained in Class I stream buffer. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit not seen from any priority travel route or use area. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| <p>Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit.</p> | | | |
| Interdisciplinary Team Recommendations | | | |
| <p>100' buffer on Class II stream. Directionally fall and split yard Class III stream. Cutting this unit should not impact potential limestone areas downslope because of the poor cave-forming quality of any limestone that may be present. Unit was flagged westward out of project area. Type A clearcut with single tree selection on lake buffer at northwest unit boundary. Mitigation measures for this unit are as follows: F5, F6, F8, W2, and W5.</p> | | | |

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

VCU : 578

UNIT : 401

QUAD : D3-SE



- Revised Control Lake Project Boundary
- Post-Field Unit Boundary w/ Setting Codes
- Other Post-Field Unit Boundaries
- USFS Timber Types for Volc 4-7
- Eagle Tree Buffer of 330ft
- Existing & Rebuilt Roads
- F.S. Roads Under Construction
- Post-Field Proposed Roads
- Ahmu-Class 1 & Stream Chantypes
- Ahmu-Class 2 & Stream Chantypes
- Ahmu-Class 3 & Stream Chantypes
- ★ Channel Type Change

- Lakes and Ponds
- Second Growth Units
- MMI 4
- McGilvery > 41

● Landings

Stream & Lake NoCUT Buffers

March 07, 1995

1 MILE

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

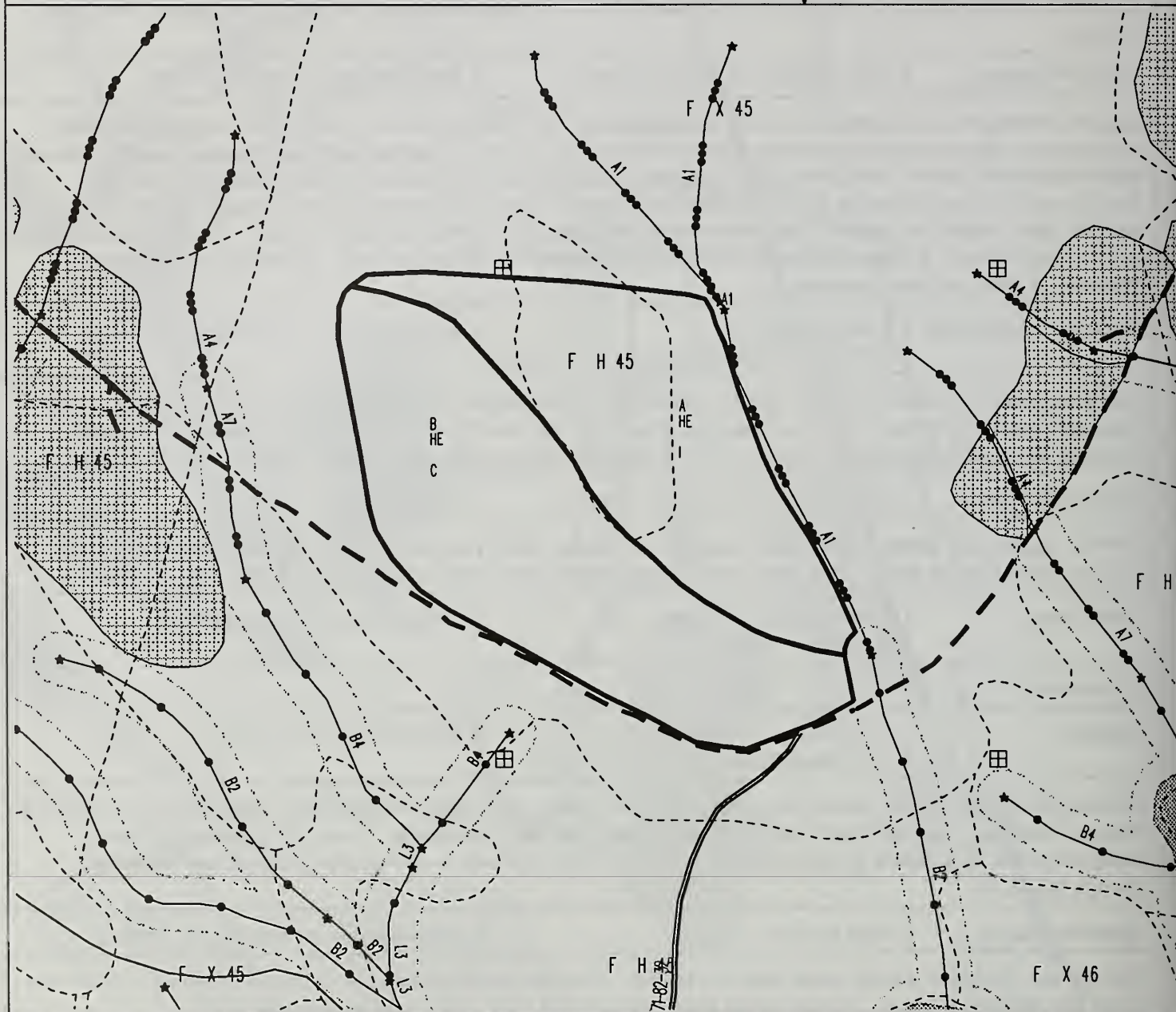
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| VCU #: 578 | UNIT #: 401 | QUARTER QUAD: D3SE | PHOTO YR/#: 1991/990-169 |
| ACRES: 102.4 | VOL.: 2722.6 MBF | LOGGING SYSTEM: Swingyard/Running Skyline | |
| LANDSCAPE ZONE: Unit is located in the Honker Block and within the second 1/4 mile of the Thorne River scenic corridor. | | | |
| Timber/Vegetation | Field Review: T. Stecher 6/29/93 | Office Review: J. Goering | |
| Species composition predominantly hemlock with some cedar but a few spruce are present. Predominantly hemlock regeneration. Sparse spruce and western redcedar regeneration. Poor regeneration in the northeastern portion of the unit next to the beaver ponds. Moderate to high amounts of mistletoe infection evident in canopy throughout the unit. Riparian soils present in areas in the northern half of the unit. Fairly dense understory vegetation in the southeast portion near the lake. Harvest all mistletoe infected hemlock and plant spruce and cedar in these areas. Exclude the northeastern portion from harvest. Promote regeneration through shelterwood or seed tree harvest. Minimize soil compaction especially in poor soil drainage areas. | | | |
| Logging/Transportation | Field Review: J. Doyal/D. Keister/J. Herzberg, 7/01/93 | Office Review: K. Jehnke | |
| Unit is accessed by Road #72-83-34.1 and ten short spurs. Recommend a swing yarder with running skyline. Partial suspension would be difficult but is not required. Partial cut will be difficult due to poor deflection and tailholds. Tailholds along muskeg will need tie-backs. The S and SE borders are 100 foot muskeg buffers. Good economics. | | | |
| Watershed/Fisheries | Field Review: C. Confer, 6/25/93 | Office Review: T. Stewart | |
| Class I, flagged B/W needs a 100' buffer from edge of muskeg (flood plan area) buffer. Should continue to end of muskeg due to riparian soils. Lake along southeast end of unit needs 100' no harvest buffer, 400' selective harvest. | | | |
| Soils/Geology | Field Review: H. Sloan/ C. Confer, 6/25/93 | Office Review: T. Stewart | |
| No concerns. | | | |
| Wildlife | Field Review: H. Sloan/ C. Confer, 6/25/93 | Office Review: M. Hall | |
| Maintain floodplain system. Level 1 structure. Goshawk survey conducted - no detections. Murrelet survey conducted - presence observed. Sandhill cranes audible. Beaver, bear, and deer use evident. Avoid disturbance of wintering trumpeter swans by avoiding all human activity within 0.5 mile of known swan wintering areas during October 15 through March 15. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit not seen from any priority travel route or use area. Consider partial retention or shelterwood harvest in areas next to the lake and beaver ponds. Highly visible from major arterial road. Maximum Modification VQO. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Class I streams on west and east side require 100' buffers. Lake requires 100' no-cut buffers and 400' selective harvest. Selective lake buffer harvest should be group selection (Type I). Type G shelterwood in main unit. Although unit is greater than 100 acres, the unit will be partial cut and includes an uneven-aged managed lake buffer area. Mitigation measures for this unit are as follows: F5, F8, F10, and W2. | | | |

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

VCU : 578

UNIT : 402

QUAD : D3-SE



- Revised Control Lake Project Boundary
- Post-Field Unit Boundary w/ Setting Codes
- Other Post-Field Unit Boundaries
- USFS Timber Types for Volc 4-7
- Eagle Tree Buffer of 330ft
- Existing & Rebuilt Roads
- F.S. Roads Under Construction
- Post-Field Proposed Roads
- Ahmu-Class 1 & Stream Chantypes
- Ahmu-Class 2 & Stream Chantypes
- Ahmu-Class 3 & Stream Chantypes
- Channel Type Change

- Lakes and Ponds
- Second Growth Units
- MMI 4
- McGilvery > 41
- Landings
- Stream & Lake NoCUT Buffers

.5 MILE

March 17, 1995

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

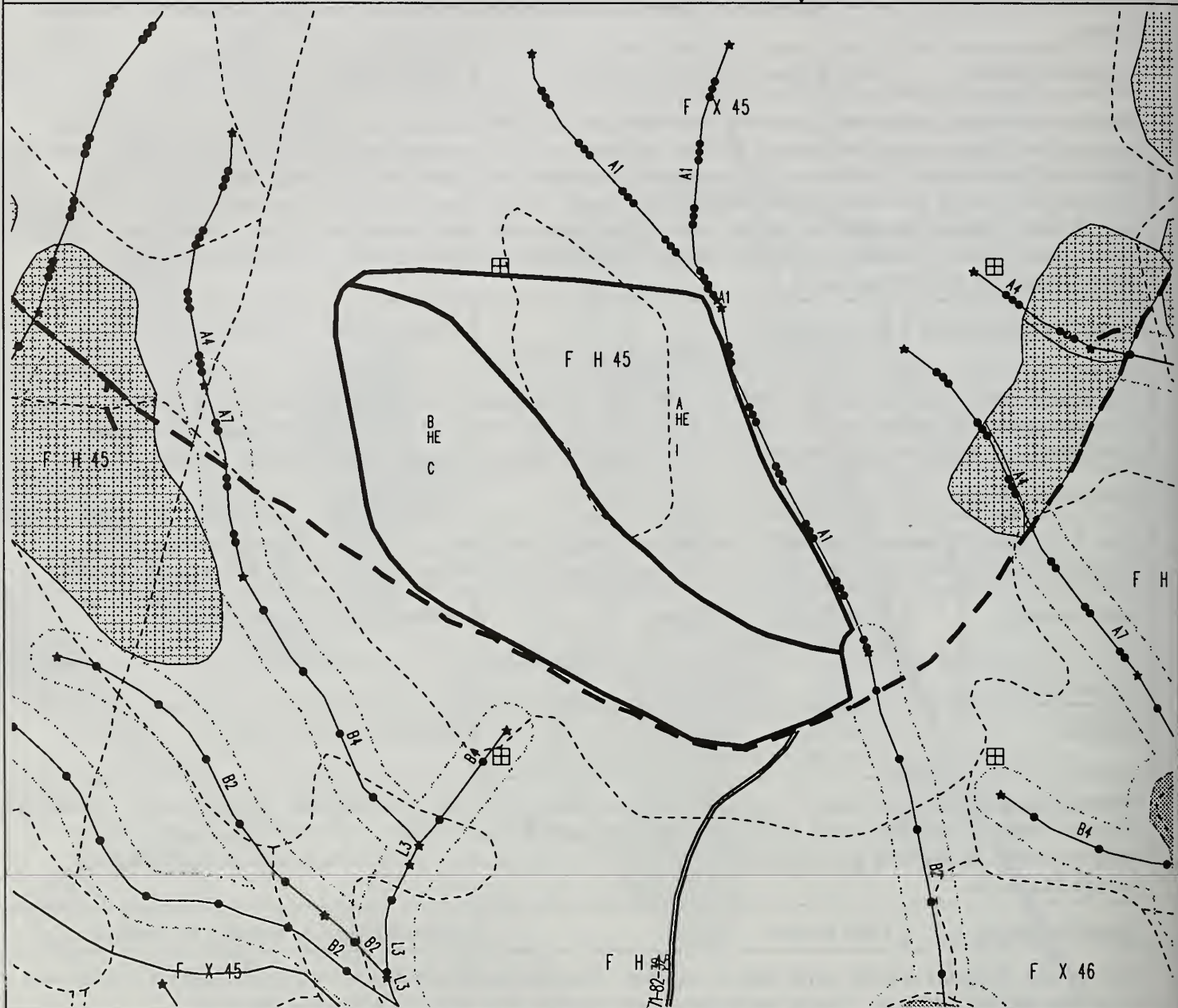
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| VCU #: 578 | UNIT #: 402 | QUARTER QUAD: D3SE | PHOTO YR/#: 1991/1090-21 |
| ACRES: 63.3 | VOL.: 2309.6 MBF | LOGGING SYSTEM: Helicopter | |
| LANDSCAPE ZONE: Unit is east of, but not within Honker Block. | | | |
| Timber/Vegetation | Field Review: S. Karstens/B. Hasebe/J. Miller, 7/13/93 | Office Review: J. Goering | |
| Species composition predominantly hemlock but includes cedar and some spruce. Regeneration predominantly hemlock and includes some spruce, but sparse cedar. Low to moderate amounts of mistletoe infection evident in canopy throughout unit. Windthrow damage present in southwest portion of unit. Rocky, relatively thin soils. Slope instability/failure potential existing in the northern portion. Small slides present. | | | |
| Logging/Transportation | Field Review: none | Office Review: K. Jehnke | |
| Unit was not visited by logging engineers. Visual constraints limit logging system to helicopter yarding. Average flight distance = 1600 feet; average flight slope = -15%; maximum flight slope = -40%. The boundary was modified during IDT to be a more practical helicopter setting. | | | |
| Watershed/Fisheries | Field Review: R. Rogers, 6/18/93 | Office Review: A. Wolfson | |
| Directional fall, split yard creek on east. | | | |
| Soils/Geology | Field Review: R. Rogers, 6/18/93 | Office Review: A Wolfson | |
| Partial suspension above 500' elevation. | | | |
| Wildlife | Field Review: G. Green, 6/18/93 | Office Review: M. Hall | |
| Heavy bear and deer sign/use. Goshawk survey conducted - no detections. Yellow-bellied sapsucker cavity(ies) identified. Retain Level 1 structure; contiguous old-growth. Avoid disturbance of wintering trumpeter swans by avoiding all human activity with 0.5 mile of known swan wintering areas during October 15 through March 15. | | | |
| Visual/Recreation | Field Review: S. Bedross | Office Review: S. Bedross, M. Greenig | |
| Keep below 450' due to visibility from Snakey Lakes and Thorne Lake. Retention VQO to be met. Keep road open after harvest, and build parking area for two to three vehicles. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Unit boundary modified. Unit was originally designed for conventional cable logging which would not allow meeting Retention VQO. Unit boundary was modified to make a logical helicopter setting while leaving logical adjacent settings and meeting adjacency requirement. Northeastern 1/2 of unit will be patch cut taking approximately 15% of timber and will meet Retention VQO (Type I). Southwestern part of unit will be harvested with a Type C clearcut. The boundary with the Type I harvest should have a 200' partial cut boundary taking only 50% of the volume and leaving windfirm trees. This prescription is meant to minimize blowdown in seen area. Target harvest towards hemlock to reduce mistletoe infection (T2). Partial cut to meet Retention VQO using helicopter logging and Type I uneven-aged management. Yard to existing unit 1/4 mile to west. Note that Unit 575-100 is the existing unit that logs will be yarded to. Mitigation measures for this unit are as follows: F6, F8, T2, V1, V2, W2, and W3. | | | |

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

VCU : 578

UNIT : 402

QUAD : D3-SE



- Revised Control Lake Project Boundary
- Post-Field Unit Boundary w/ Setting Codes
- Other Post-Field Unit Boundaries
- USFS Timber Types for Volc 4-7
- Eagle Tree Buffer of 330ft
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- Post-Field Proposed Roads
- Ahmu-Class 1 & Stream Chantypes
- Ahmu-Class 2 & Stream Chantypes
- Ahmu-Class 3 & Stream Chantypes
- ★ Channel Type Change

- Lakes and Ponds
- Second Growth Units
- MMI 4
- McGilvery > 41
- Landings
- Stream & Lake NoCUT Buffers

March 17, 1995

.5 MILE

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

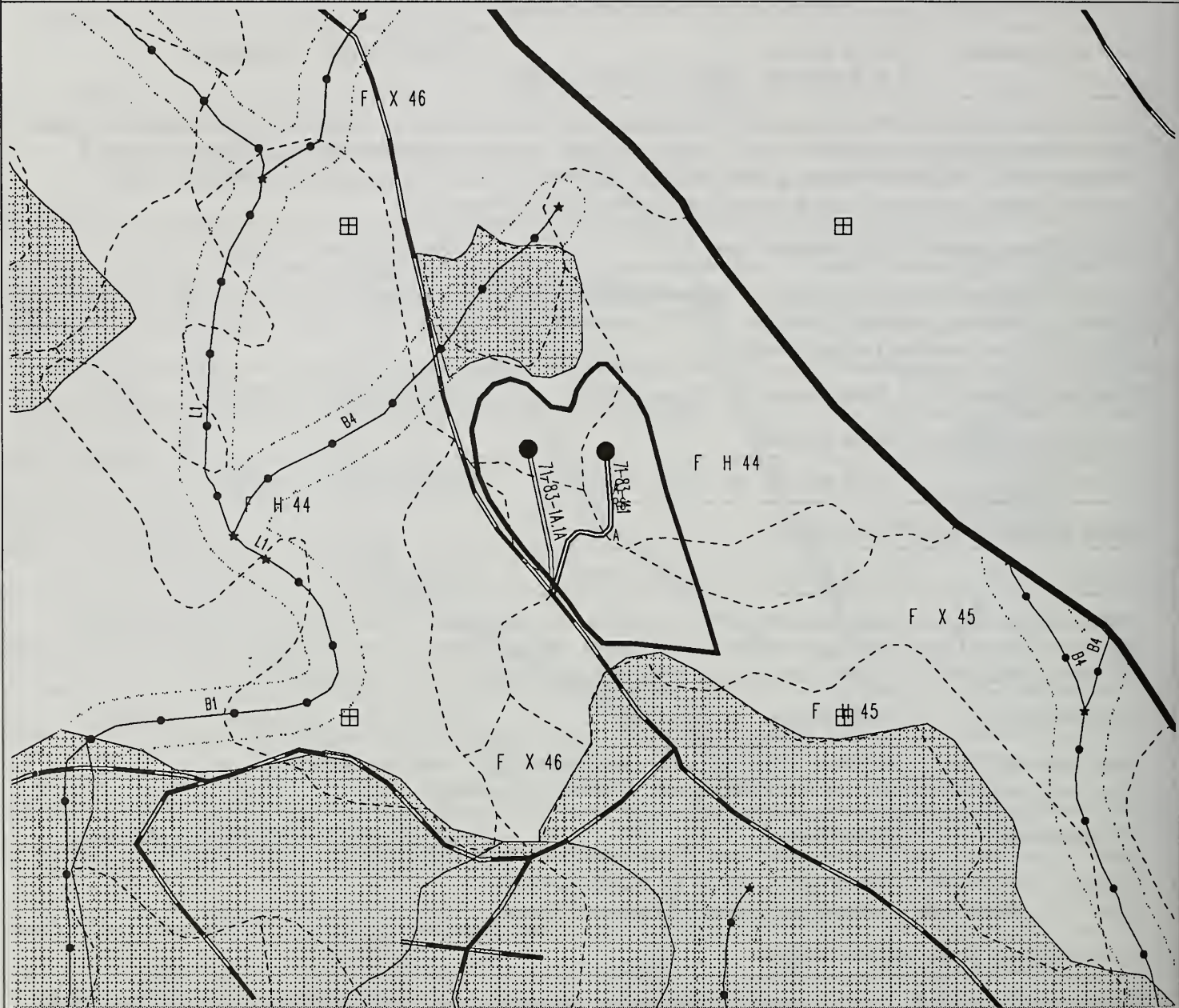
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|--|---|---|--------------------------|
| VCU #: 578 | UNIT #: 402 | QUARTER QUAD: D3SE | PHOTO YR/#: 1991/1090-21 |
| ACRES: 63.3 | VOL.: 2309.6 MBF | LOGGING SYSTEM: Helicopter | |
| LANDSCAPE ZONE: Unit is east of, but not within Honker Block. | | | |
| Timber/Vegetation | Field Review: S. Karstens/B. Hasebe/J. Miller, 7/13/93 | Office Review: J. Goering | |
| Species composition predominantly hemlock but includes cedar and some spruce. Regeneration predominantly hemlock and includes some spruce, but sparse cedar. Low to moderate amounts of mistletoe infection evident in canopy throughout unit. Windthrow damage present in southwest portion of unit. Rocky, relatively thin soils. Slope instability/failure potential existing in the northern portion. Small slides present. | | | |
| Logging/Transportation | Field Review: none | Office Review: K. Jehnke | |
| Unit was not visited by logging engineers. Visual constraints limit logging system to helicopter yarding. Average flight distance = 1600 feet; average flight slope = -15%; maximum flight slope = -40%. The boundary was modified during IDT to be a more practical helicopter setting. | | | |
| Watershed/Fisheries | Field Review: R. Rogers, 6/18/93 | Office Review: A. Wolfson | |
| Directional fall, split yard creek on east. | | | |
| Soils/Geology | Field Review: R. Rogers, 6/18/93 | Office Review: A Wolfson | |
| Partial suspension above 500' elevation. | | | |
| Wildlife | Field Review: G. Green, 6/18/93 | Office Review: M. Hall | |
| Heavy bear and deer sign/use. Goshawk survey conducted - no detections. Yellow-bellied sapsucker cavity(ies) identified. Retain Level 1 structure; contiguous old-growth. Avoid disturbance of wintering trumpeter swans by avoiding all human activity with 0.5 mile of known swan wintering areas during October 15 through March 15. | | | |
| Visual/Recreation | Field Review: S. Bedross | Office Review: S. Bedross, M. Greenig | |
| Keep below 450' due to visibility from Snakey Lakes and Thorne Lake. Retention VQO to be met. Keep road open after harvest, and build parking area for two to three vehicles. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Unit boundary modified. Unit was originally designed for conventional cable logging which would not allow meeting Retention VQO. Unit boundary was modified to make a logical helicopter setting while leaving logical adjacent settings and meeting adjacency requirement. Northeastern 1/2 of unit will be patch cut taking approximately 15% of timber and will meet Retention VQO (Type I). Southwestern part of unit will be harvested with a Type C clearcut. The boundary with the Type I harvest should have a 200' partial cut boundary taking only 50% of the volume and leaving windfirm trees. This prescription is meant to minimize blowdown in seen area. Target harvest towards hemlock to reduce mistletoe infection (T2). Partial cut to meet Retention VQO using helicopter logging and Type I uneven-aged management. Yard to existing unit 1/4 mile to west. Note that Unit 575-100 is the existing unit that logs will be yarded to. Mitigation measures for this unit are as follows: F6, F8, T2, V1, V2, W2, and W3. | | | |

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

VCU : 578

UNIT : 403

QUAD : C2-NW



- Revised Control Lake Project Boundary
- Post-Field Unit Boundary w/ Setting Codes
- Other Post-Field Unit Boundaries
- USFS Timber Types for Volc 4-7
- Eagle Tree Buffer of 330ft
- Existing & Rebuilt Roads
- F.S. Roads Under Construction
- Post-Field Proposed Roads
- Ahmu-Class 1 & Stream Chantypes
- Ahmu-Class 2 & Stream Chantypes
- Ahmu-Class 3 & Stream Chantypes
- Channel Type Change

- Lakes and Ponds
- Second Growth Units
- MMI 4
- McGilvery > 41
- Landings
- Stream & Lake NoCUT Buffers

May 16, 1994

.5 MILE

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

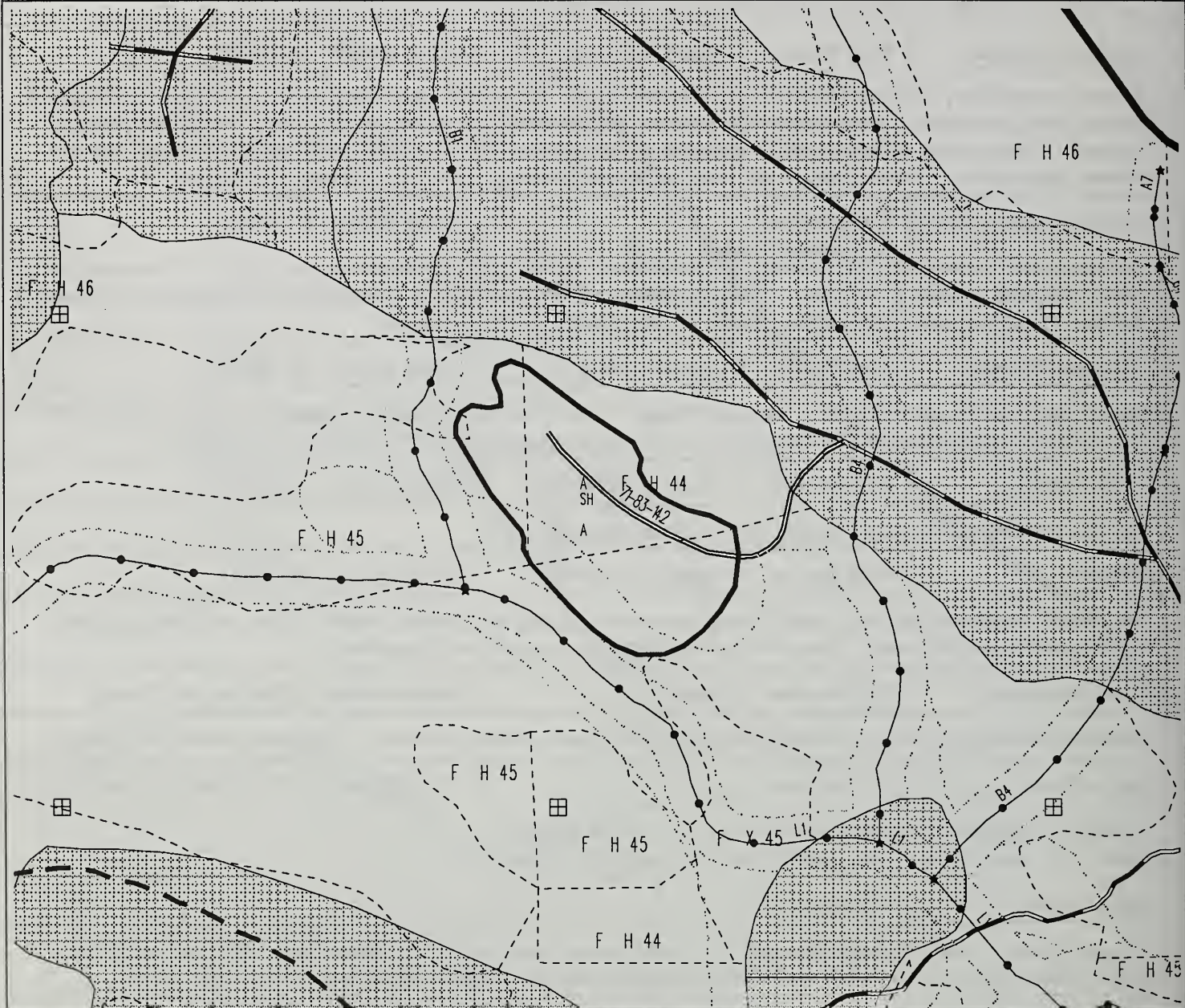
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|--|--|---|-------------------------|
| VCU #: 578 | UNIT #: 403 | QUARTER QUAD: C2NW | PHOTO YR/#: 1991/690-37 |
| ACRES: 15.7 | VOL.: 392.0 MBF | LOGGING SYSTEM: Swingyarder/Running Skyline | |
| LANDSCAPE ZONE: Unit is located in the Honker Watershed. | | | |
| Timber/Vegetation | Field Review: T. Stecher, 7/13/93 | Office Review: J. Goering | |
| Species composition predominantly hemlock but includes some spruce and cedar. Regeneration predominantly hemlock but includes a few spruce. Moderate to high amounts of mistletoe infection evident in canopy. Windthrow potential minimal. Cable yarding recommended to minimize soil compaction. Harvest all mistletoe infected hemlock and cut infected regeneration. Promote spruce and cedar regeneration through shelterwood or seed tree harvest. | | | |
| Logging/Transportation | Field Review: E. Urstadt/J. Spolar, 7/01/93 | Office Review: K. Jehnke | |
| Unit is accessed by Road #71-83-14.1. Unit is adjacent to USFS Road #3015. Recommend swing yarding with running skyline. Partial suspension is possible. Partial cut is possible. Good economics. | | | |
| Watershed/Fisheries | Field Review: S. Tanguay, 6/28/93 | Office Review: T. Stewart | |
| One stream in unit - enters off 3015 road in northwest of unit. One trout observed. Mapped as Class I, flagged B/W 100' buffer for approximately 250' from 3015 to fork in channel. Flagged O/W from fork to muskeg. | | | |
| Soils/Geology | Field Review: S. Tanguay, 6/28/93 | Office Review: T. Stewart | |
| No soils concerns noted in field check. Low to moderate slopes. | | | |
| Wildlife | Field Review: S. Tanguay, 6/28/93 | Office Review: M. Hall | |
| Bring unit boundary to edge of scrubby timber surrounding muskeg to northeast of unit. Close road following entry. Woodpecker(s) audible in unit. Fairly contiguous old-growth; retain Level 1 structure. | | | |
| Visual/Recreation | Field Review: S. Bedross | Office Review: S. Bedross, M. Greenig | |
| Modified landscape. Unit is not visible from any priority travel routes or use areas. Maximum Modification VQO. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Original boundary to north modified to reflect updated second growth layer. No streams are within unit as laid out. Type A clearcut - yard away from road #3015. Mitigation measures for this unit are as follows: F8 and W5. | | | |

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

VCU : 578

UNIT : 404

QUAD : C2-NW



- Revised Control Lake Project Boundary
- Post-Field Unit Boundary w/ Setting Codes
- Other Post-Field Unit Boundaries
- USFS Timber Types for Volc 4-7
- Eagle Tree Buffer of 330ft
- Existing & Rebuilt Roads
- F.S. Roads Under Construction
- Post-Field Proposed Roads
- Ahmu-Class 1 & Stream Chantypes
- Ahmu-Class 2 & Stream Chantypes
- Ahmu-Class 3 & Stream Chantypes
- ★ Channel Type Change

- Lakes and Ponds
- Second Growth Units
- MMI 4
- McGilvery > 41
- Landings
- Stream & Lake NoCUT Buffers

May 16, 1994

.5 MILE

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

| | | | |
|---|---|---|--------------------------|
| VCU #: 578 | UNIT #: 404 | QUARTER QUAD: C2NW | PHOTO YR/ #: 1991/690-35 |
| ACRES: 16.2 | VOL.: 314.0 MBF | LOGGING SYSTEM: Shovel | |
| LANDSCAPE ZONE: Unit is in the Honker Watershed and Honker Block. | | | |
| Timber/Vegetation | Field Review: T. Stecher, 7/13/93 | Office Review: J. Goering | |
| Species composition predominantly hemlock but includes some spruce and cedar. Predominantly hemlock regeneration. Low to moderate amounts of mistletoe infection evident in canopy. Promote spruce regeneration through seed tree harvest or promote spruce/cedar regeneration through planting. Harvest all mistletoe infected hemlock and cut infected regeneration. | | | |
| Logging/Transportation | Field Review: S. Field/T. Wetzel, 8/30/93 | Office Review: J. Doyal | |
| Unit is accessed by Road #71-83-14.2. Shovel log entire unit. Partial cut is possible. A 100 foot stream buffer is on the SW edge. Fair economics. | | | |
| Watershed/Fisheries | Field Review: B. Romey, 7/08/93 | Office Review: T. Stewart | |
| 100' buffer required (TTRA) on Streams 1 (southeast side of unit) and 2 (on west side of unit). 100' additional select harvest buffer on Stream 1 and Stream 2. | | | |
| Soils/Geology | Field Review: M. Minnillo, 7/08/93 | Office Review: T. Stewart | |
| Flat, low elevation unit. No stability concerns. | | | |
| Wildlife | Field Review: M. Minnillo, 7/08/93 | Office Review: M. Hall | |
| Riparian travel corridor along southern boundary of unit is heavily used by deer, bear, wolves and beaver. Class I stream buffer will help maintain this corridor. Western end of unit is higher volume TSHE, open stand, good thermal cover. Recommend leaving at least 50' strip of trees along muskeg on the northeast and southeast corner of unit to maintain hiding cover. Contiguous HCC/second growth to north, west, and east of unit; retain Level 2 structure. | | | |
| Visual/Recreation | Field Review: S. Bedross | Office Review: S. Bedross, M. Greenig | |
| Modified landscape. Unit is not visible from any priority travel routes or use areas. Maximum modification VQO. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Timber west of Class I stream left to provide a future logical unit. 100' no-harvest buffer plus 100' selective harvest on streams. Harvest in selective cut buffers should be small groups (approximately 1/4 acre in size). Type A clearcut outside selective harvest buffers. Mitigation measures for this unit are as follows: F5, F8, W5, and W2 in riparian selective buffer. | | | |

NO UNIT MAP
UNIT DROPPED OR DEFERRED

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

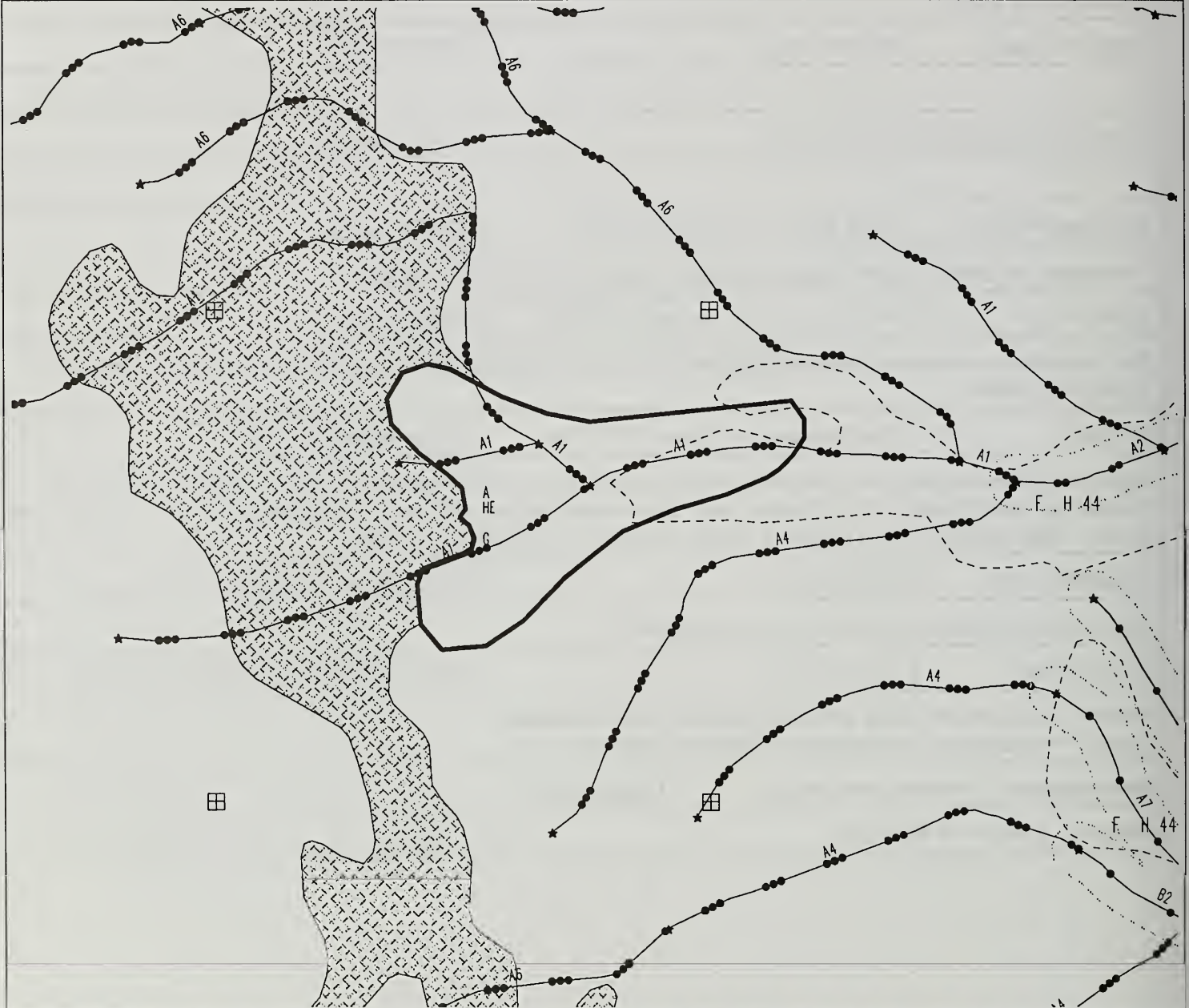
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|---|------------------------------------|---|------------------------|
| VCU #: 591 | UNIT #: 402 | QUARTER QUAD: C4NW | PHOTO YR/#: 1991/790-9 |
| ACRES: | VOL.: | LOGGING SYSTEM: | |
| LANDSCAPE ZONE: | | | |
| Timber/Vegetation | Field Review: | Office Review: | |
| | | | |
| Logging/Transportation | Field Review: | Office Review: | |
| | | | |
| Watershed/Fisheries | Field Review: B. Romey, 7/01/93 | Office Review: | |
| All streams are Class III, O/W flagging; no buffer. Stream 1 has unstable side slopes. | | | |
| Soils/Geology | Field Review: M. Minnillo, 7/01/93 | Office Review: | |
| Full suspension over stream running through unit due to steep in-channel side slopes which are sluffing and slumping throughout channel. | | | |
| Wildlife | Field Review: M. Minnillo, 7/01/93 | Office Review: M. Hall | |
| Eagle nest observed along Class I stream to the east of unit 600' to 700' downstream of unit. Timing restrictions on blasting will exist if road is w/i 1/2 mile of nest. Recommend further eagle nest reconsideration on Class I stream to east of unit. High deer/wolf use in channel and throughout unit. Retain Level 1 structure | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit not seen from any priority travel route or use area. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | Reviewed By: | |
| Dropped. Less than 8 MBF/acre. | | | |

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

VCU : 591

UNIT : 403

QUAD : C4-NW



- Revised Control Lake Project Boundary
- Post-Field Unit Boundary w/ Setting Codes
- Other Post-Field Unit Boundaries
- USFS Timber Types for Valc 4-7
- Eagle Tree Buffer of 330ft
- Existing & Rebuilt Roads
- F.S. Roads Under Construction
- Post-Field Proposed Roads
- Ahmu-Class 1 & Stream Chantypes
- Ahmu-Class 2 & Stream Chantypes
- Ahmu-Class 3 & Stream Chantypes
- Channel Type Change

- Lakes and Ponds
- Second Growth Units
- MMI 4
- McGilvery > 41
- Landings
- Stream & Lake NoCUT Buffers

May 16, 1994

.5 MILE

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

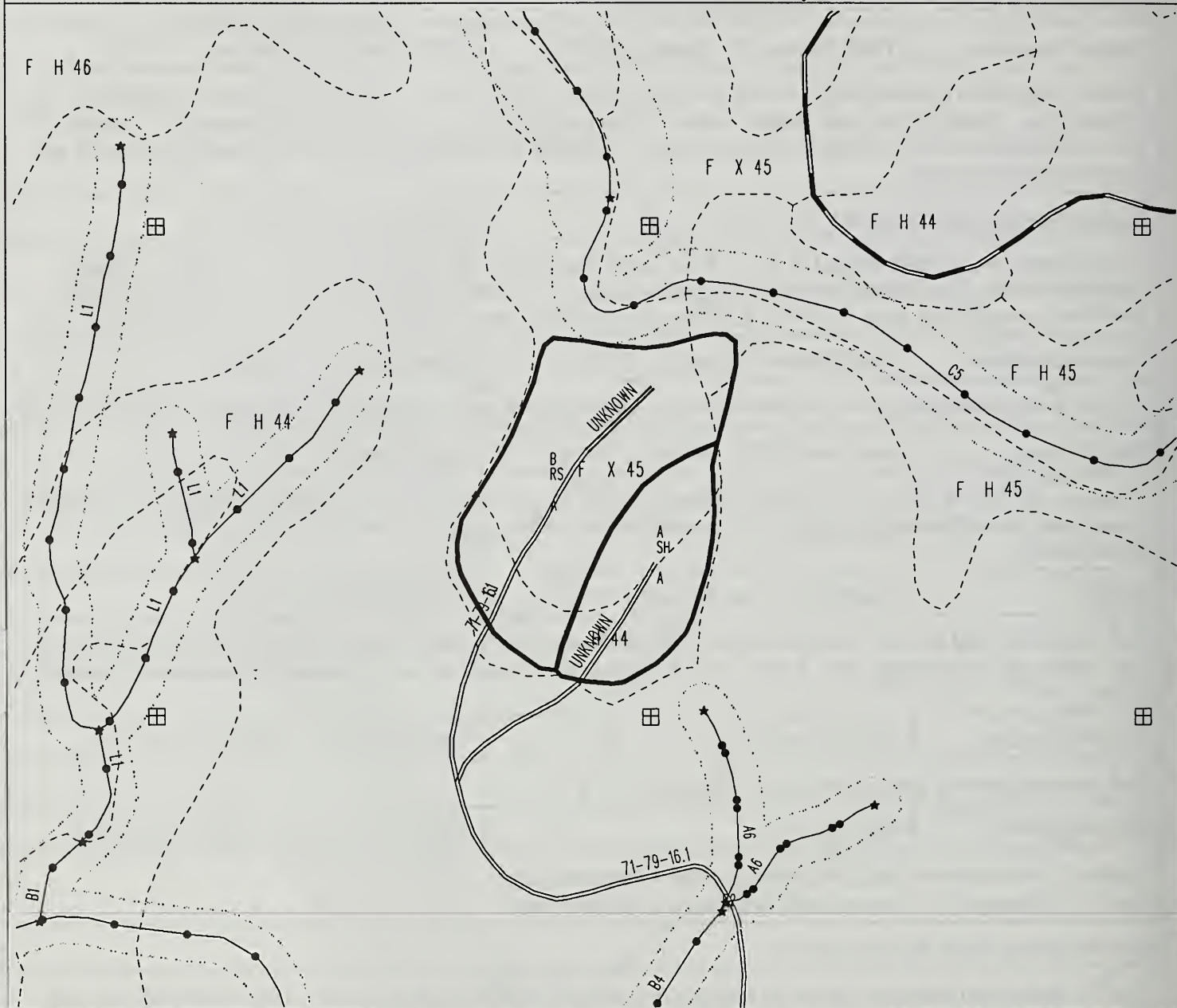
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|--|------------------------------------|---|------------------------|
| VCU #: 591 | UNIT #: 403 | QUARTER QUAD: C4NW | PHOTO YR/#: 1991/790-9 |
| ACRES: 21 | VOL.: 209.2 MBF | LOGGING SYSTEM: Helicopter | |
| LANDSCAPE ZONE: Western Peninsula Central Area | | | |
| Timber/Vegetation | Field Review: T. Stecher, 8/23/93 | Office Review: J. Goering | |
| Species composition predominantly hemlock but includes cedar. Regeneration predominantly hemlock but includes yellow-cedar. Alaska yellow cedar decline evident. Regeneration concerns due to low site index soils in the southern half. Helicopter harvest the northern pocket of timber. Consider removing unit from unit pool due to low quality and economic costs of harvest. | | | |
| Logging/Transportation | Field Review: None | Office Review: K. Martin | |
| Unit boundary has not been flagged in field. Road access was deemed infeasible because of a "V"-notch and high construction costs. Recommend helicopter yarding to landing at 34+00 on road #71-79-34.1. Average flight path = 4500 feet, average flight slope = -15%. Recommend cutting only merch timber to make unit more economical. | | | |
| Watershed/Fisheries | Field Review: B. Romey, 7/01/93 | Office Review: J. Knutzen | |
| Streams in north and central part of unit are Class III and need to be split yarded with full suspension crossing stream. | | | |
| Soils/Geology | Field Review: M. Minnillo, 7/01/93 | Office Review: J. Knutzen | |
| Slopes are 40 to 70 % in unit. Wet site in southern unit and directly west of unit. No slope instability noted. Unstable stream bank in southern portion of unit. Recommend full suspension to prevent soil disturbance on upper slopes and stream banks. | | | |
| Wildlife | Field Review: M. Minnillo, 7/01/93 | Office Review: M. Hall | |
| High deer, bear, and wolf use throughout unit. Woodpeckers audible in unit. Heron observed in riparian area east of unit. Many new HCC's near unit. Retain Level 3 structure due to large expanse of natural fragmentation in surrounding matrix. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit not seen from any priority travel route or use area. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Type G shelterwood helicopter harvest to maintain structure per wildlife recommendation. Directionally fall and yard away from all Class III streams in unit. Mitigation measures for this unit are as follows: F2, F6, and W2. | | | |

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

VCU : 591

UNIT : 405

QUAD : C4-NW



- Revised Control Lake Project Boundary
- Post-Field Unit Boundary w/ Setting Codes
- Other Post-Field Unit Boundaries
- USFS Timber Types for Volc 4-7
- Eagle Tree Buffer of 330ft
- Existing & Rebuilt Roads
- F.S. Roads Under Construction
- Post-Field Proposed Roads
- Ahmu-Class 1 & Stream Chantypes
- Ahmu-Class 2 & Stream Chantypes
- Ahmu-Class 3 & Stream Chantypes
- Channel Type Change

- Lakes and Ponds
- Second Growth Units
- MMI 4
- McGilvery > 41
- Landings
- Stream & Lake NoCUT Buffers



.5 MILE

May 16, 1994

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

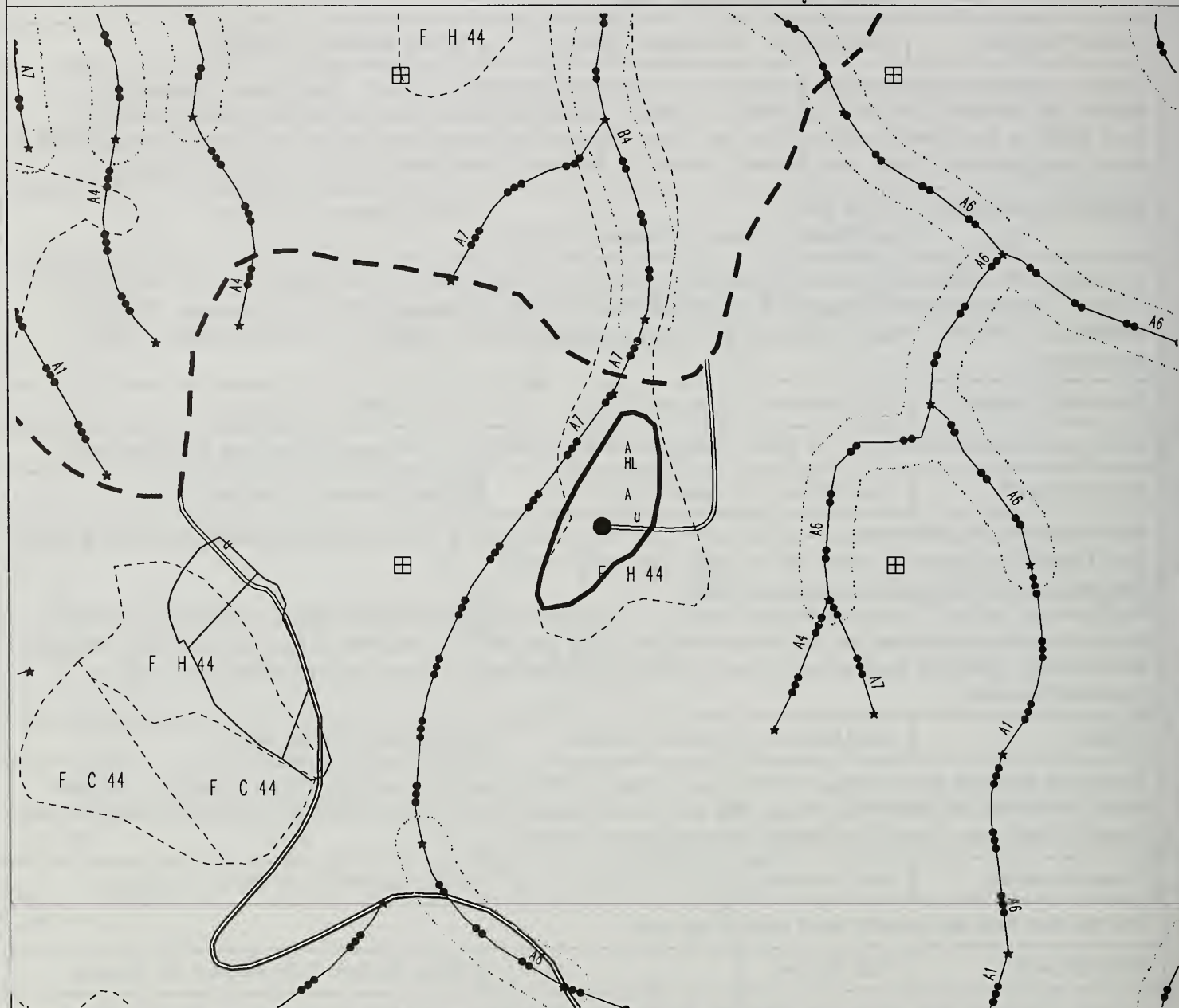
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|---|--|---|-------------------------|
| VCU #: 591 | UNIT #: 405 | QUARTER QUAD: C4NW | PHOTO YR/#: 1991/790-30 |
| ACRES: 27 | VOL.: 957.4 MBF | LOGGING SYSTEM: Swingyarder/Running Skyline, Shovel | |
| LANDSCAPE ZONE: Western Peninsula Central Area. | | | |
| Timber/Vegetation | Field Review: S. Karstens, 8/03/93 | Office Review: J. Goering | |
| Species composition predominantly hemlock but a few spruce and cedar are present. Regeneration predominantly hemlock but includes a few cedar and spruce. Moderate to high amounts of mistletoe infection evident in canopy. Rock bluffs on the higher elevations of the unit. Many benches and terraces also present. Windthrow damage present in areas throughout unit. Rocky soils in areas. Harvest all mistletoe infected hemlock and cut infected regeneration. | | | |
| Logging/Transportation | Field Review: E. Urstadt/J. Spolar/J. Herzberg, 8/06/93 | Office Review: M. Whitty | |
| Road access was attempted from the NE but a large bridge is required. Road was then flagged south to existing USFS "P"-line. Recommend shovel logging SE setting and swing yarding with running skyline the remainder. Partial suspension is possible. Partial cut is possible. A 100 foot stream buffer is flagged on the north boundary. Poor economics. | | | |
| Watershed/Fisheries | Field Review: G. Jackson, 7/02/93 | Office Review: J. Knutzen | |
| There are no streams in this unit. A Class I stream flows along east side of unit, requiring at least a 100 foot buffer. | | | |
| Soils/Geology | Field Review: G. Jackson, 7/02/93 | Office Review: J. Knutzen | |
| Mostly stable slopes, but some areas of McGilvey soils near highest part of unit. Partial-suspension is required in this area. Dissolution features common, but no caves; some small dolines. <u>Geology/Karst (D. Herron/R. Horrocks, 8/23/93):</u> Unit traversed on foot. Limestone bedrock top of unit. Topography indicated approximately 100' above sea level. Numerous grikes and dolines, but poorly developed; no caves observed and very little surface water (may be indication of hidden karst). The karst features are not well developed, relief and depth to water table probably slight. Not an important karst area. | | | |
| Wildlife | Field Review: C. Confer, 7/02/93 | Office Review: M. Hall | |
| Directional fall away from muskeg located on the southeast corner of the unit. Level 1 structure retention. Goshawk survey conducted - no detections. Eagle, bear and deer sign/use evident. Cruisers observed bald eagle soaring over unit. Ocean 1/2 mile west of unit. Woodpecker feeding cavities identified. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit not seen from any priority travel route or use area. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Important local native sites identified during post-field scoping. Unit and vicinity require detailed cultural resource inventory prior to any road or unit layout. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Type A clearcut. Partial suspension is required in unit and is available where needed. Stream north of unit needs 100' buffer. Mitigation measures for this unit are as follows: F3, F5, F8, F10 and W5. | | | |

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

VCU : 591

UNIT : 407

QUAD : C4-NW



- Revised Control Lake Project Boundary
- Post-Field Unit Boundary w/ Setting Codes
- Other Post-Field Unit Boundaries
- USFS Timber Types for Volc 4-7
- Eagle Tree Buffer of 330ft
- Existing & Rebuilt Roads
- F.S. Roads Under Construction
- Post-Field Proposed Roads
- Ahmu-Class 1 & Stream Chantypes
- Ahmu-Class 2 & Stream Chantypes
- Ahmu-Class 3 & Stream Chantypes
- Channel Type Change

- Lakes and Ponds
- Second Growth Units
- MMI 4
- McGilvery > 41
- Landings
- Stream & Lake NoCUT Buffers

August 08, 1994

.5 MILE

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

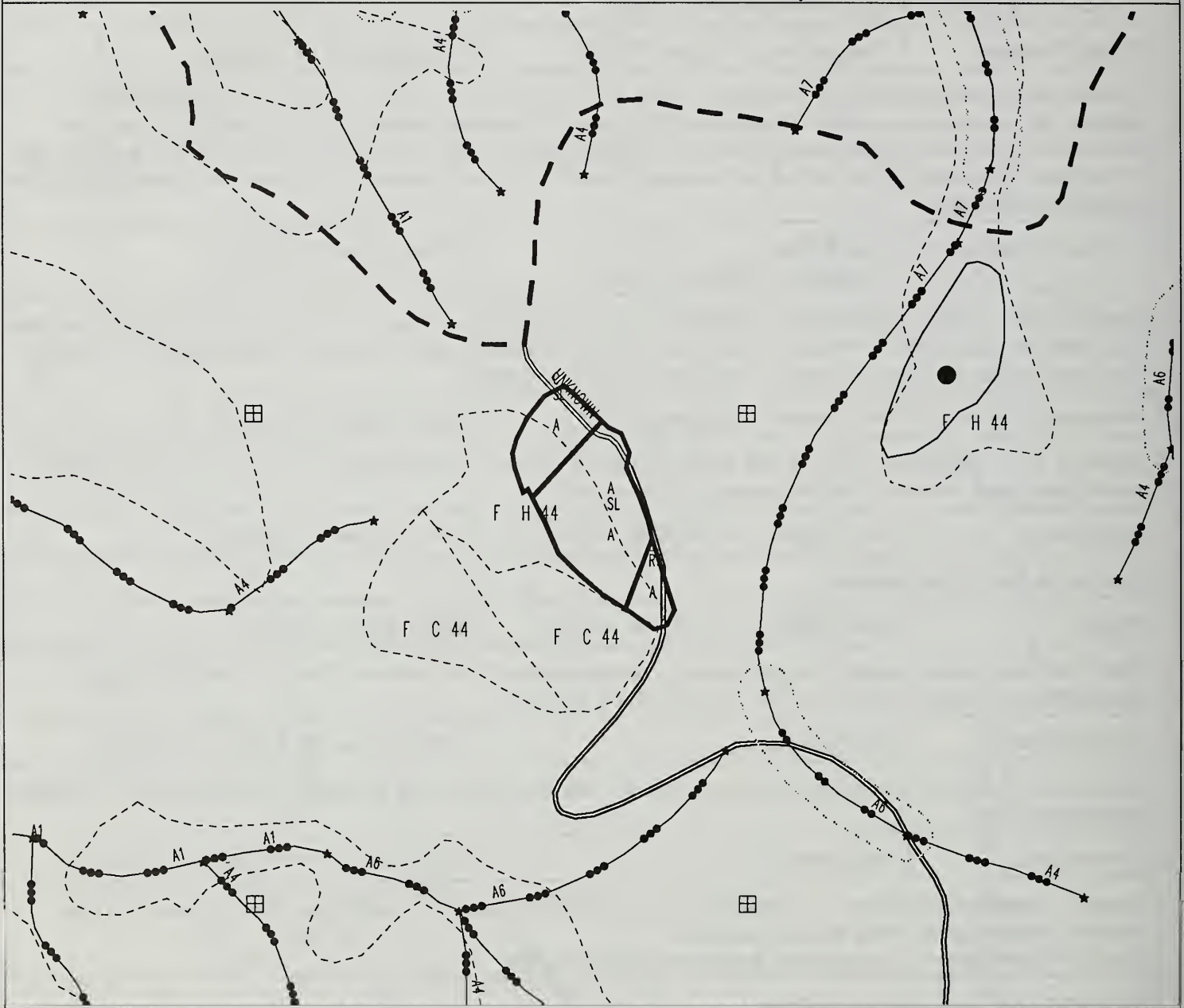
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|---|--|---|-------------------------|
| VCU #: 591 | UNIT #: 407 | QUARTER QUAD: C4NW | PHOTO YR/#: 1991/790-30 |
| ACRES: 5.1 | VOL.: 120.6 MBF | LOGGING SYSTEM: Highlead | |
| LANDSCAPE ZONE: Western Peninsula Central Area. | | | |
| Timber/Vegetation | Field Review: J. Miller, 8/03/93 | Office Review: J. Goering | |
| Species composition predominantly hemlock and cedar but a few spruce are present. Regeneration predominantly hemlock but includes some spruce. Moderate to high amounts of mistletoe infection evident in canopy. Lower site index/productivity present in southern portion. Mixed conifer, salal present. Harvest all mistletoe infected hemlock and cut infected regeneration during harvest and thinning treatments. Promote spruce/cedar regeneration through planting and slight soil scarification. | | | |
| Logging/Transportation | Field Review: J. Spolar/B. Wilkinson, 8/03/93 | Office Review: E. Urstadt | |
| Unit was split into two sub-units which encompass the only merch timber. Roads 71-79-21.2 and 71-79-21.1 access these units from an existing USFS "P"-line. A 70 foot tower with highlead system will work. Tailholds may need tie-backs. North sub-unit has very poor economics. South unit has poor economics. | | | |
| Watershed/Fisheries | Field Review: B. Romey, 7/02/93 | Office Review: J. Knutzen | |
| Stream in NW portion of unit needs a 100' buffer for this Class II area, and it changes to a Class III stream in the unit needing split yard, directional fall, full suspend across stream. | | | |
| Soils/Geology | Field Review: M. Minnillo, 7/02/93 | Office Review: J. Knutzen | |
| Low slopes; no stability problems. | | | |
| Wildlife | Field Review: M. Minnillo, 7/02/93 | Office Review: M. Hall | |
| Unit is the same general scrubby, muskeg habitat as surrounding area. No concerns. There are plenty of snags in surroundings. Moderate to high deer use. Retain Level 2 structure. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit not seen from any priority travel route or use area. Seen from West Coast Waterway in Middleground. Maximum Modification VQO. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Important local native sites identified during post-field scoping. Unit and vicinity require detailed cultural resource inventory prior to any road or unit layout. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Boundary was modified to provide stream buffers. Type A clearcut because of unit size, adjacent timber and snags. Mitigation measures for this unit are as follows: F5, F6, F8, and W5. | | | |

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

VCU : 591

UNIT : 409

QUAD : C4-NW



- Revised Control Lake Project Boundary
- Post-Field Unit Boundary w/ Setting Codes
- Other Post-Field Unit Boundaries
- USFS Timber Types for Volc 4-7
- Eagle Tree Buffer of 330ft
- Existing & Rebuilt Roads
- F.S. Roads Under Construction
- Post-Field Proposed Roads
- Ahmu-Class 1 & Stream Chantypes
- Ahmu-Class 2 & Stream Chantypes
- Ahmu-Class 3 & Stream Chantypes
- Channel Type Change

- Lakes and Ponds
- Second Growth Units
- MMI 4
- McGilvery > 41
- Landings
- Stream & Lake NoCUT Buffers

May 16, 1994

.5 MILE

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

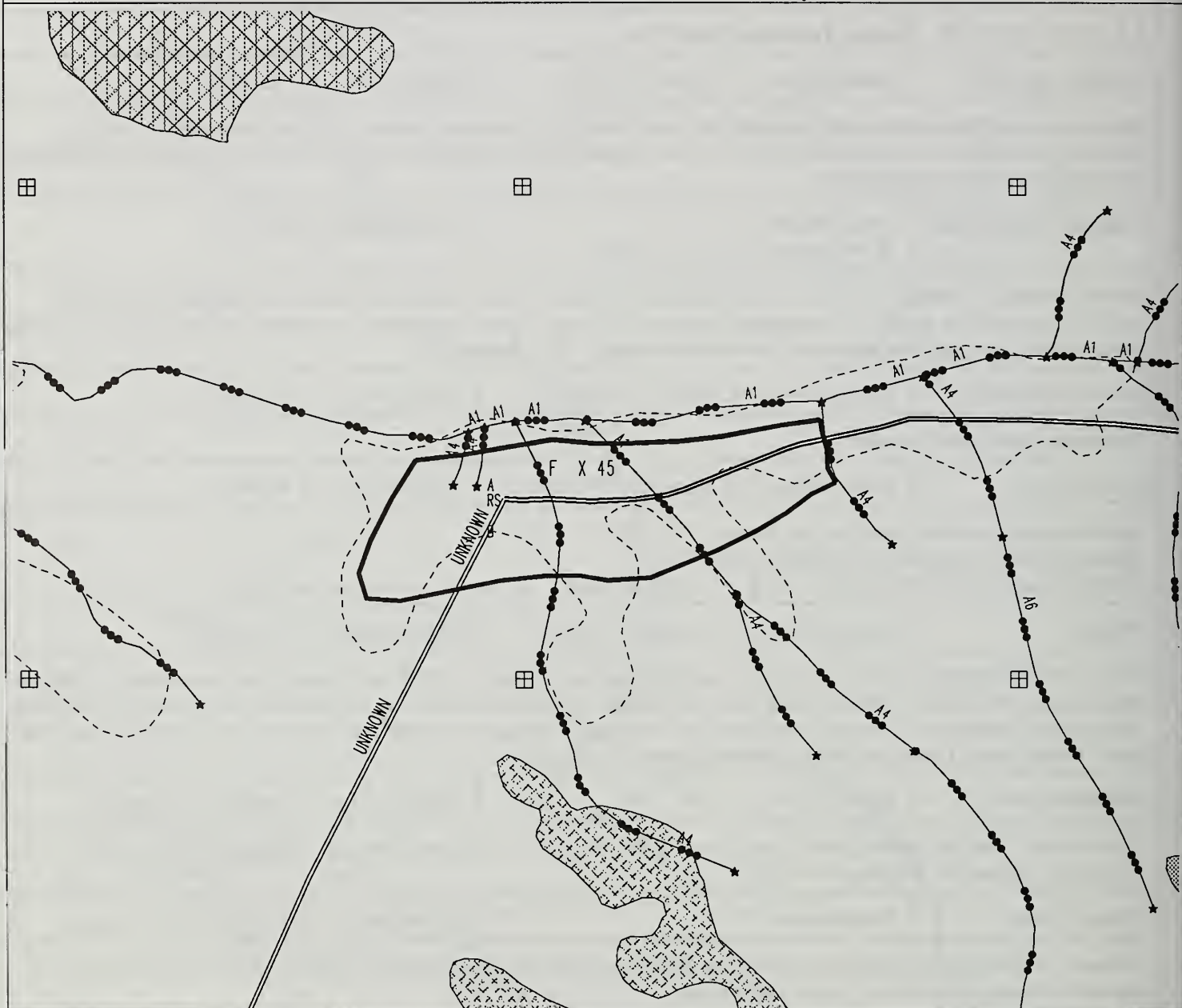
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|---|--|--|-------------------------|
| VCU #: 591 | UNIT #: 409 | QUARTER QUAD: C4NW | PHOTO YR/#: 1991/790-30 |
| ACRES: 7.7 | VOL.: 105.0 MBF | LOGGING SYSTEM: Slackline with 70' Tower, Swingyarder/Running Skyline | |
| LANDSCAPE ZONE: Western Peninsula Central Area. | | | |
| Timber/Vegetation | Field Review: G. Hedin, 7/15/93 | Office Review: J. Goering | |
| Species composition predominantly hemlock and cedar but a few spruce are present. Regeneration predominantly hemlock but includes a few cedar and spruce. Low volume, multi-species stand with < 50% canopy closure and low site productivity in the northern portion. | | | |
| Logging/Transportation | Field Review: B. Wilkinson/J. Graves, 8/04/93 | Office Review: E. Urstadt | |
| Unit is accessed by Road #71-79-28.1. Recommend a 70 foot tower with slack line system to maximize suspension. Artificial guys will be needed and equipment anchors will work. Partial suspension is possible on steep slopes. A swing yarder with running skyline will work for the south setting. Fair economics. | | | |
| Watershed/Fisheries | Field Review: B. Romey, 7/02/93 | Office Review: J. Knutzen | |
| No streams inside unit boundary. | | | |
| Soils/Geology | Field Review: M. Minnillo, 7/02/93 | Office Review: J. Knutzen | |
| Partial suspension where possible due to steep, rocky soils. <u>Geology/Karst (D. Herron/R. Horrocks, 8/23/93):</u> Unit traversed on foot. Poor exposures of non-carbonate rock. No limestone or karst observed. | | | |
| Wildlife | Field Review: M. Minnillo, 7/02/93 | Office Review: R. Fairbanks | |
| Heavy browse throughout unit. Wolf, bear, and deer sign use evident. Several deer seen in and around unit. Wolf sign also found in top of unit. Wolf howling heard by cruiser. Higher volume than most stands in area, but still low volume. Recommend dropping the northern portion of unit to maintain higher volume habitat for cover and bedding by deer and bear. Retain Level 1 structure due to matrix of natural fragmentation. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit not seen from any priority travel route or use area. Post-field boundary minimizes visibility from West Coast Waterway. Maximum Modification VQO. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Important local native sites identified during post-field scoping. Unit and vicinity require detailed cultural resource inventory prior to any road or unit layout. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Type A clearcut because unit is only 7.7 acres in size and has only 105 MBF. Mitigation measures for this unit are F8 and W5. | | | |

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

VCU : 592

UNIT : 401

QUAD : C5-NE



- Revised Control Lake Project Boundary
- Post-Field Unit Boundary w/ Setting Codes
- Other Post-Field Unit Boundaries
- USFS Timber Types for Volc 4-7
- Eagle Tree Buffer of 330ft
- Existing & Rebuilt Roads
- F.S. Roads Under Construction
- Post-Field Proposed Roads
- Ahmu-Class 1 & Stream Chantypes
- Ahmu-Class 2 & Stream Chantypes
- Ahmu-Class 3 & Stream Chantypes
- Channel Type Change

- Lakes and Ponds
- Second Growth Units
- MMI 4
- McGilvery > 41
- Landings
- Stream & Lake NoCUT Buffers

May 16, 1994

0.5 MILE

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

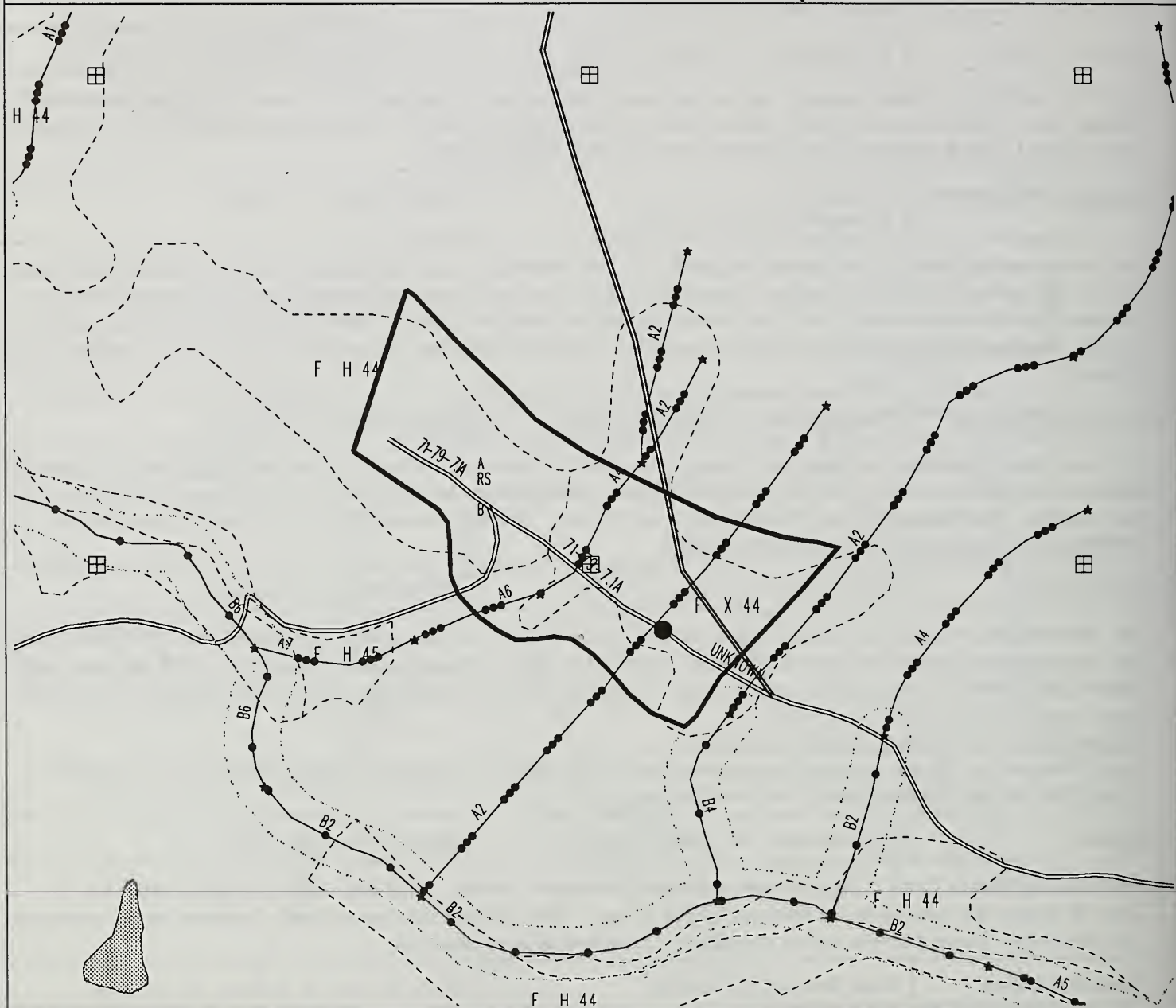
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|--|---|---|-------------------------|
| VCU #: 592 | UNIT #: 401 | QUARTER QUAD: C5NE | PHOTO YR/#: 1991/790-27 |
| ACRES: 20.8 | VOL.: 450.4 MBF | LOGGING SYSTEM: Swingyarder/Running Skyline | |
| LANDSCAPE ZONE: Western Peninsula Central Area. | | | |
| Timber/Vegetation | Field Review: J. Miller, 8/17/93 | Office Review: J. Goering | |
| Species composition includes hemlock, spruce, and cedar. Regeneration predominantly hemlock with some spruce but is lacking cedar. Relatively low volume, multi-species, multi-canopy stand with < 50% canopy closure in the eastern half. Steep slopes (> 90%) into the Class III stream to the north (buffered 100'). | | | |
| Logging/Transportation | Field Review: S. Field/D. Keister, 8/23/93 | Office Review: K. Martin | |
| Unit is accessed by Road #71-79-28 and one small spur. Recommend swing yarding with running skyline to harvest unit. Seventy five percent is downhill yarding. Engineers found several extremely small streams that were flagged O/W, but not mentioned on stream report. A 70 foot tower may full suspend these creeks. Verify stream protection during final layout. The stream along the north boundary was given a 100 foot buffer but was not classed by stream specialist. Fair economics. | | | |
| Watershed/Fisheries | Field Review: E. Ablow, 7/15/93 | Office Review: J. Knutzen | |
| No direct fishery concerns, but there are direct stream stability concerns. The main channel has deeply incised steep side slopes on the eastern portion of the unit that must not be cut below slope break. There are six streams that drain into the main stream. The eastern portion of the unit has a lot of seeps. The main channel has a lot of debris (wood, rubble, boulders, etc.) coming from this portion of the unit. | | | |
| Soils/Geology | Field Review: E. Ablow, 7/15/93 | Office Review: J. Knutzen | |
| The main stream flow east to west is deeply incised along the western half of the unit. Side slopes are 100% plus slopes. The eastern side of the unit has quite a few seeps, appears less stable. There are pistol butted trees, rock outcrops, and signs of old slumps. Trees are high on their roots. It appears soil has washed away under them. Maintain boundary at slope break (100' to 150'). <u>Geology/Karst (D. Herron/R. Horrocks, 8/18/93):</u> Aerial observation. Numerous small ponds above west facing slope. No limestone or karst observed. Rock appears to be andesite and poor quality; timber confirms likelihood. | | | |
| Wildlife | Field Review: H. Sloan, 7/05/93 | Office Review: M. Hall | |
| No concerns. Retain Level 2 structure due to naturally fragmented matrix. High bald eagle activity on other side of Class III stream that runs along the northern border of unit. Bear and deer sign/use evident. Goshawk survey conducted - no detections. Dawn murrelet survey conducted. - presence/behavior observed. | | | |
| Visual/Recreation | Field Review: S. Bedross | Office Review: S. Bedross, M. Greenig | |
| Unit not seen from any priority travel route or use area. Seen from West Coast Waterway in Middleground. Maximum Modification VQO. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Recommend bald eagle survey prior to implementation. Move east boundary from currently flagged area, west to next stream due to unstable soils, existing flagging will need to be moved prior to final layout. Maintain north boundary at 100' to 150' south of Class III stream. Split yard Class III streams in unit. Type B clearcut. Mitigation measures for this unit are as follows: F1, F6, F8, F10 and W4. | | | |

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

VCU : 592

UNIT : 402

QUAD : C5-NE



- Revised Control Lake Project Boundary
- Post-Field Unit Boundary w/ Setting Codes
- Other Post-Field Unit Boundaries
- USFS Timber Types for Volc 4-7
- Eagle Tree Buffer of 330ft
- Existing & Rebuilt Roads
- F.S. Roads Under Construction
- Post-Field Proposed Roads
- Ahmu-Class 1 & Stream Chantypes
- Ahmu-Class 2 & Stream Chantypes
- Ahmu-Class 3 & Stream Chantypes
- Channel Type Change

- Lakes and Ponds
- Second Growth Units
- MMI 4
- McGilvery > 41
- Landings
- Stream & Lake NoCUT Buffers

May 16, 1994

.5 MILE

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

| | | | |
|--|--|---|--------------------------|
| VCU #: 592 | UNIT #: 402 | QUARTER QUAD: C5NE | PHOTO YR/#: 1991/790-139 |
| ACRES: 31.5 | VOL.: 366.0 MBF | LOGGING SYSTEM: Swingyarder/Running Skyline | |
| LANDSCAPE ZONE: Unit in Western Peninsula Central Area and adjacent to Semi-Primitive Recreation Area. | | | |
| Timber/Vegetation | Field Review: G. Hedin, 7/28/93 | Office Review: J. Goering | |
| Species composition predominantly hemlock but includes some spruce and cedar. Regeneration predominantly hemlock with some spruce but is lacking cedar. Some rock bluffs on the higher elevations of the unit. Some poor soil drainage areas throughout the unit. Two intermittent streams flow through the unit. | | | |
| Logging/Transportation | Field Review: S. Field/C. Giles, 8/10/93 | Office Review: J. Doyal | |
| Unit is accessed by Road #71-79-7.1 and a small spur. Recommend swingyarder with running skyline. Additional profiles during final layout will allow location of boundary to assure partial suspension. Partial cut is not feasible. Fair to poor economics. If access through primitive recreation is denied, engineers recommend moving Road #71-79-7.1 uphill to NE. Field engineer feels this might be possible and warns that topographic map is inaccurate. | | | |
| Watershed/Fisheries | Field Review: B. Romey, 7/27/93 | Office Review: T. Stewart | |
| Stream 1 is a Class IIa - B/W, 100' TTRA buffer. Stream 1A, 2, 3, and 4 are Class III - O/W, split yard. Use stream 1 as unit boundary. | | | |
| Soils/Geology | Field Review: M. Minnillo, 7/27/93 | Office Review: T. Stewart | |
| Require partial suspension in western half of unit due to steep slopes. Geology/Karst (D. Herron/R. Horrocks, 8/18/93: Aerial observation. Probably andesite rock overlying limestone. Poor timber presence confirms likelihood. No limestone or karst observed. | | | |
| Wildlife | Field Review: M. Minnillo, 7/27/93 | Office Review: M. Hall | |
| Eastern third of unit is high use deer habitat. Retain Level 2 structure due to naturally fragmented matrix. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit not seen from any priority travel route or use area. Seen from West Coast Waterway in Middleground. Maximum Modification VQO. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Identify Primitive Recreation LUD boundary and road location prior to final layout. As flagged in field unit's west boundary extends into Semi-Primitive Recreation boundary. Access road locations changed to avoid entry into Semi-Primitive Recreation Area. Note that field flagged roads on west side enter Semi-Primitive Recreation area. Run additional profiles prior to final layout to ensure partial suspension requirement. Type B clearcut. Mitigation measures for this unit are as follows: F3, F5, F6, F7 and W4. | | | |

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

VCU : 592

UNIT : 403

QUAD : C5-NE



- Revised Control Lake Project Boundary
- Post-Field Unit Boundary w/ Setting Codes
- Other Post-Field Unit Boundaries
- USFS Timber Types for Volc 4-7
- Eagle Tree Buffer of 330ft
- Existing & Rebuilt Roads
- F.S. Roads Under Construction
- Post-Field Proposed Roads
- Ahmu-Class 1 & Stream Chantypes
- Ahmu-Class 2 & Stream Chantypes
- Ahmu-Class 3 & Stream Chantypes
- Channel Type Change

- Lakes and Ponds
- Second Growth Units
- MMI 4
- McGilvery > 41
- Landings
- Stream & Lake NoCUT Buffers

May 16, 1994

.5 MILE

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

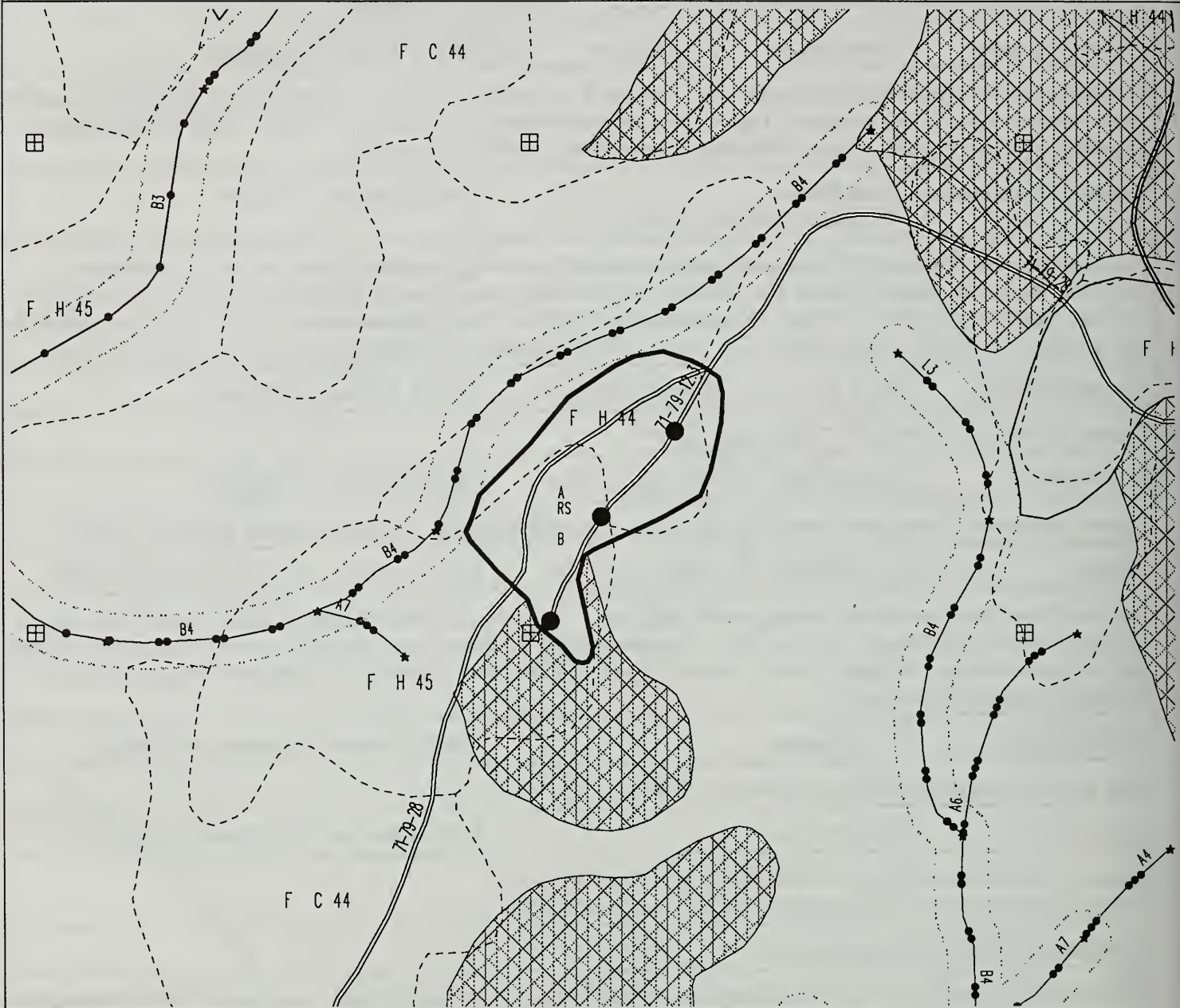
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|---|--|---|---------------------------|
| VCU #: 592 | UNIT #: 403 | QUARTER QUAD: C5NE | PHOTO YR/#: 1991/1990-184 |
| ACRES: 13 | VOL.: 203.3 MBF | LOGGING SYSTEM: Helicopter | |
| LANDSCAPE ZONE: Unit is within Western Peninsula Late Successional Corridor. | | | |
| Timber/Vegetation | Field Review: M. Case, 8/11/93 | Office Review: J. Goering | |
| Species composition predominantly hemlock and cedar but a few spruce are present. Regeneration predominantly hemlock with some spruce but is lacking cedar. High amounts of mistletoe infection evident in canopy. Fairly dense understory vegetation. Moderately low volume, multi-canopy stand with < 50% canopy closure. | | | |
| Logging/Transportation | Field Review: J. Doyal/J. Herzberg, 8/16/93 | Office Review: K. Martin | |
| Access to the nearest road is 2.5 miles away and a road would go through primitive recreational area. Recommend helicopter yarding to landing 2+98 in Unit 592-404. Partial cutting merch trees is recommended to increase economics. Average flight slope = +6%. Average flight distance = 2700 feet. Very poor economics. Unit was laid out in field for swing yarder. A 100 foot stream buffer is on the SE. Survey primitive recreation boundary prior to any field layout. | | | |
| Watershed/Fisheries | Field Review: B. Romey, 7/27/93 | Office Review: T. Stewart | |
| Stream 1 is Class II - B/W, 100' TTRA buffer. | | | |
| Soils/Geology | Field Review: M. Minnillo, 7/27/93 | Office Review: T. Stewart | |
| Eastern half of unit is steep with several seeps, requires full suspension if unit boundary extends down into V-notch. | | | |
| Wildlife | Field Review: M. Minnillo, 7/27/93 | Office Review: M. Hall/C. Confer, 8/17/93 | |
| Intensively used deer/bear forage/bedding/winter range area. Harvesting of unit will remove quality winter range habitat. Eagles nest tree approximately 1/2 mile from unit, approximately 50' from beach. Heavy bear and deer sign/use. Timing restrictions on blasting will apply if road is within 1/2 mile of either nest. Retain Level 2 structure due to large expanse of natural fragmentation in matrix. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit not seen from any priority travel route or use area. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | : | |
| Clearly identify Primitive Rec LUD boundary prior to final layout. As flagged in field, unit's north boundary extends into Semi-Primitive Recreation area. Helicopter must stay a minimum of 1/4 mile away from active eagles nest. Survey to determine nest activity. Maintain 100' buffer on Class II stream. Type C clearcut. Mitigation measures for this unit are: F2, F5, W3, and W8. | | | |

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

VCU : 592

UNIT : 404

QUAD : C5-NE



- Revised Control Lake Project Boundary
- Post-Field Unit Boundary w/ Setting Codes
- Other Post-Field Unit Boundaries
- USFS Timber Types for Volc 4-7
- Eagle Tree Buffer of 330ft
- Existing & Rebuilt Roads
- F.S. Roads Under Construction
- Post-Field Proposed Roads
- Ahmu-Class 1 & Stream Chantypes
- Ahmu-Class 2 & Stream Chantypes
- Ahmu-Class 3 & Stream Chantypes
- Channel Type Change

- Lakes and Ponds
- Second Growth Units
- MMI 4
- McGilvery > 41
- Landings
- Stream & Lake NoCUT Buffers



.5 MILE

May 16, 1994

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

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|--|---|---|--------------------------|
| VCU #: 592 | UNIT #: 404 | QUARTER QUAD: C5NE | PHOTO YR/#: 1991/790-139 |
| ACRES: 14.9 | VOL.: 327.6 MBF | LOGGING SYSTEM: Swingyarder/Running Skyline | |
| LANDSCAPE ZONE: Unit is within Western Peninsula Late Successional Corridor. | | | |
| Timber/Vegetation | Field Review: S. Karstens, 7/27/93 | Office Review: J. Goering | |
| Species composition predominantly hemlock but includes some spruce and cedar. Regeneration predominantly hemlock with some spruce but is lacking cedar. Low to moderate amounts of mistletoe infection evident in canopy. Salmonberry and salal present. Stream runs through unit and needs buffering. Rock bluffs located in the southwest portion. | | | |
| Logging/Transportation | Field Review: S. Field/D. Keister, 8/14/93 | Office Review: J. Doyal | |
| Unit is accessed by Road #71-79-28 and spur. Recommend swing yarding with running skyline, partial suspension is possible. Partial cut is possible. A 100 foot stream buffer is on the NW boundary. The bear den near SW of unit was not found by engineers. Good economics. | | | |
| Watershed/Fisheries | Field Review: G. Jackson, 7/06/93 | Office Review: T. Stewart | |
| One stream parallels western boundary (resident trout observed). The stream is close to saltwater shoreline and assumed to flow into Class I due to its low gradient. Requires 100' buffer on each side, with an extension to 170' on the lower east side due to steep, unstable banks. Recommend excluding western corner (west of stream) due to difficulty in logging. A small part of the north corner, north of the stream, could be difficult to log and is a very small area anyway. Recommend also excluding from harvest. | | | |
| Soils/Geology | Field Review: G. Jackson, 7/06/93 | Office Review: T. Stewart | |
| Generally moderate slopes (40 - 60%); one area greater then 70% and loose McGilvery type soils - partial to full suspension required. | | | |
| Wildlife | Field Review: C. Confer, 7/06/93 | Office Review: M. Hall | |
| Bear and deer sign/use evident. Active bear den approximately 100' south of southeast unit boundary. Do not extend boundary south of present location. Four adult bald eagles circling and calling over south end of unit - responded to goshawk surveying. No goshawk detection. Wolf kill (fawn) found along western boundary. Retain Level 2 structure. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit not seen from any priority travel route or use area. Seen from West Coast Waterway in Middleground. Maximum Modification VQO. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Unit boundary modified for stream concerns. Maintain 100' buffer for stream on west side. Type B clearcut. Retain cedar and spruce for leave trees. Maintain partial to full suspension over steep areas with McGilvery soils. Mitigation measures for this unit are F3, F5, F8, F10, and W4. | | | |

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

VCU : 592

UNIT : 405

QUAD : C5-NE



- Revised Control Lake Project Boundary
- Post-Field Unit Boundary w/ Setting Codes
- Other Post-Field Unit Boundaries
- USFS Timber Types for Volc 4-7
- Eagle Tree Buffer of 330ft
- Existing & Rebuilt Roads
- F.S. Roads Under Construction
- Post-Field Proposed Roads
- Ahmu-Class 1 & Stream Chantypes
- Ahmu-Class 2 & Stream Chantypes
- Ahmu-Class 3 & Stream Chantypes
- Chonnel Type Change

- Lakes and Ponds
- Second Growth Units
- MMI 4
- McGilvery > 41
- Landings
- Stream & Lake NoCUT Buffers

May 16, 1994

.5 MILE

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

| | | | |
|---|--|---|--------------------------|
| VCU #: 592 | UNIT #: 405 | QUARTER QUAD: C5NE | PHOTO YR/#: 1991/790-139 |
| ACRES: 17.2 | VOL.: 315.3 MBF | LOGGING SYSTEM: Swingyarder/Running Skyline | |
| LANDSCAPE ZONE: Unit is in Western Peninsula Central Area. | | | |
| Timber/Vegetation | Field Review: M. Case, 7/28/93 | Office Review: J. Goering | |
| Species composition predominantly hemlock but includes some cedar and spruce. Regeneration predominantly hemlock but includes a few spruce. Light amount of mistletoe infection evident in canopy. Areas with McGilvery soils have low volume, mixed species, multi-canopy with < 50% canopy closure and low site productivity. Fairly dense understory vegetation with salal present. Good advanced regeneration (candidate for release) consisting of hemlock and spruce on the northern slope. Drop area of McGilvery soils from the unit. | | | |
| Logging/Transportation | Field Review: S. Field/C. Giles, 8/16/93 | Office Review: E. Urstadt | |
| Unit is accessed by Road #71-79-28 and one short spur. Recommend using swing yarder with running skyline. Ninety percent is uphill logging. Use a large swingyarder because of scattered, large spruce. Partial suspension is possible on most of the unit. Partial cut is not practical due to lack of "lift", blowdown potential and inadequate tailholds. Areas of poor timber were deleted from unit. Fair economics. | | | |
| Watershed/Fisheries | Field Review: G. Jackson, 7/06/93 | Office Review: A. Wolfson | |
| One stream on the south part of the unit is Class III and requires split yarding away from stream. Recommend putting boundary on north side of stream. Another stream runs along the western boundary. This will need a 100' buffer on each side. The buffer boundary on the east side will form the western boundary of the unit in this area. The lake on east should be far from the unit boundary; however, it needs 100' no-cut buffer plus 400' selective harvest. | | | |
| Soils/Geology | Field Review: G. Jackson, 7/06/93 | Office Review: A. Wolfson | |
| In general, slopes are moderate to steep. Two areas require special attention - the east slope of that part of unit and the northeast part (see map). Full suspension is required on the east slope. Exclude the northwest part of the unit from harvest. <u>Geology/Karst (D. Herron/R. Horrocks, 8/18/93:</u> Unit traversed on foot. No limestone or karst features observed. A lot of loose non-carbonate bedrock. Probably andesite. | | | |
| Wildlife | Field Review: C. Confer, 7/06/93 | Office Review: M. Hall | |
| Level 1 structure retention. Beaver dam along southwest boundary received a 100' buffer due to stream class. 7/06 dawn murrelet survey conducted. Presence behavior observed. Goshawk survey conducted. No detections. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit not seen from any priority travel route or use area. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Type A clearcut. A Class II stream flows along the west unit boundary and it requires a 100' no-cut buffer. North and East boundary modified to exclude McGilvery soils where full suspension not possible. Mitigation measures for this unit are as follows: F1, F8, F10, and W5. | | | |













CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD







VCU : 592

UNIT : 406

QUAD : C5-NE



-  Revised Control Lake Project Boundary
-  Post-Field Unit Boundary w/ Setting Codes
-  Other Post-Field Unit Boundaries
-  USFS Timber Types for Volc 4-7
-  Eagle Tree Buffer of 330ft
-  Existing & Rebuilt Roads
-  F.S. Roads Under Construction
-  Post-Field Proposed Roads
-  Ahmu-Class 1 & Stream Chantypes
-  Ahmu-Class 2 & Stream Chantypes
-  Ahmu-Class 3 & Stream Chantypes
-  Channel Type Change

-  Lakes and Ponds
 Second Growth Units
 MMI 4
 McGilvery > 41
 Landings
 Stream & Lake NoCUT Buffers

.5 MILE

May 16, 1994

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

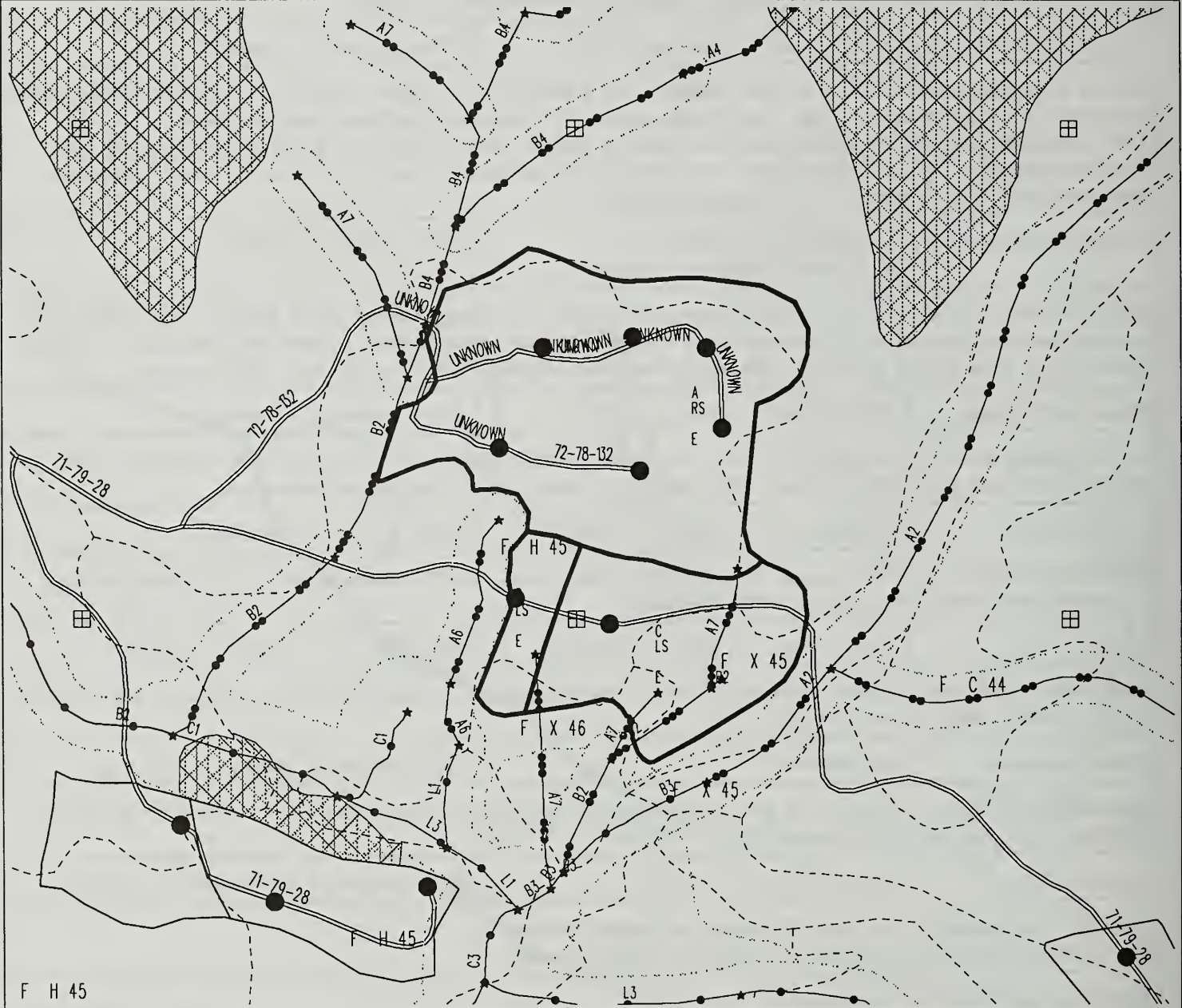
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|---|--|---|---------------------------|
| VCU #: 592 | UNIT #: 406 | QUARTER QUAD: C5NE | PHOTO YR/#: 1991/1990-183 |
| ACRES: 15.1 | VOL.: 371.5 MBF | LOGGING SYSTEM: Live Skyline (Shotgun) with 70' Tower | |
| LANDSCAPE ZONE: Unit is within Western Peninsula Late Successional Corridor. | | | |
| Timber/Vegetation | Field Review: B. Hasebe, 8/10/93 | Office Review: J. Goering | |
| Species composition predominantly hemlock and cedar but a few spruce are present. Regeneration predominantly hemlock with some spruce but is lacking cedar. Fairly dense understory vegetation. Windthrow damage present. Low to moderate amounts of mistletoe infection evident in canopy. Rock bluffs on the higher elevations of the unit. Exclude the northeast corner from the unit. Good advanced regeneration (candidate for release). Class III drainages throughout unit. Consider split yarding to minimize damage. | | | |
| Logging/Transportation | Field Review: E. DeWilde/ T. Hoshall/J. Herzberg, 8/18/93 | Office Review: M. Whitty | |
| Unit is accessed by Road #71-79-28. The original unit boundary was changed due to visual concerns. To achieve the required partial suspension, a 70 foot tower using a shotgun system is recommended. Partial cut is practical. A 500 foot coastal buffer is on the SW boundary. The unstable soils have been excluded from the unit. Fair economics. | | | |
| Watershed/Fisheries | Field Review: J. Metzler, 7/27/93 | Office Review: T. Stewart | |
| No fish bearing streams in or adjacent to unit. Two small Class III streams flow through the unit, but they are not incised, stable, and greater than 2' wide. They also do not require split yarding or full suspension. | | | |
| Soils/Geology | Field Review: J. Metzler, 7/27/93 | Office Review: T. Stewart | |
| Short, broken bluffs in southeast corner above 240' elevation. Small, shallow slides associated with blow-down where slopes are greater than 70% - achieve partial suspension. | | | |
| Wildlife | Field Review: H. Sloan, 7/27/93 | Office Review: M. Hall/C. Confer | |
| Eagle's nest within 400' southwest from unit. Level 1 structure retention. Timing restrictions on blasting will exist if the road is laid out within 1/2 mile of nest. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Keep below 200' due to visibility from West Coast Waterway and Maurelle Islands Wilderness. Seen from West Coast Waterway in Foreground. Modification VQO. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Achieve partial suspension where small slides associated with blowdown occur. Ensure 400' buffer is maintained from eagle nest prior to final layout. Type B. Mitigation measures for this unit are as follows: F1, F8, W4, W8, and W10. | | | |

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

VCU : 592

UNIT : 407

QUAD : C5-NE



- Revised Control Lake Project Boundary
- Post-Field Unit Boundary w/ Setting Codes
- Other Post-Field Unit Boundaries
- USFS Timber Types for Valc 4-7
- Eagle Tree Buffer of 330ft
- Existing & Rebuilt Roads
- F.S. Roads Under Construction
- Past-Field Proposed Roads
- Ahmu-Class 1 & Stream Chantypes
- Ahmu-Class 2 & Stream Chantypes
- Ahmu-Class 3 & Stream Chantypes
- Channel Type Change

- Lakes and Ponds
- Second Growth Units
- MMI 4
- McGilvery > 41
- Landings
- Stream & Lake NoCUT Buffers

June 09, 1994

.5 MILE

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

| | | | |
|---|---|--|--------------------------|
| VCU #: 592 | UNIT #: 407 | QUARTER QUAD: C5NE | PHOTO YR/#: 1991/790-140 |
| ACRES: 52.7 | VOL.: 928.2 MBF | LOGGING SYSTEM: Live Skyline with 70' Tower, Running Skyline | |
| LANDSCAPE ZONE: Unit is within Western Peninsula Late Successional Corridor. | | | |
| Timber/Vegetation | Field Review: 8/5/93 | Office Review: J. Goering | |
| Species composition predominantly hemlock but includes some cedar and spruce. Regeneration predominantly hemlock but includes some spruce in areas of windthrow. Fairly dense understory vegetation. Heavy mistletoe in many areas. Windthrow damage present in middle portion of unit. Minimize soil disturbance and avoid yarding over bog/muskeg areas in the middle of the unit. Good advanced regeneration (candidate for release) consisting of cedar, hemlock and spruce. | | | |
| Logging/Transportation | Field Review: E. DeWilde/T. Hoshall, 8/17/93 | Office Review: E. Urstadt | |
| Unit is accessed by Road #71-79-28, 72-78-13.2 and 72-78-13.3. North 2/3 of unit should be swing yarded using running skyline. On south portion use 70 foot tower with shotgun system. Run profiles during final layout to assure partial suspension can be met in the area of concern. Poor tailholds are on the west boundary; tie-backs may be needed. A 100 foot stream buffer is flagged on the SE boundary. Classify NW stream prior to final layout. Fair to good economics. | | | |
| Watershed/Fisheries | Field Review: J. Metzler, 7/27/93 | Office Review: T. Stewart | |
| There is a Class I stream south of the unit that requires a 100' buffer. A Class III tributary flows southwest through the south end of the unit and should be split yarded or achieve full suspension if yarded across. The lower 100' of this stream is Class IIa and requires a 100' buffer. Three other Class III streams that originate below 200' selection should be split yarded also due to evidence of past instability and very wet conditions. A Class III stream borders part of the western edge. | | | |
| Soils/Geology | Field Review: J. Metzler, 7/27/93 | Office Review: T. Stewart | |
| Between 120' to 180' the slope is very wet - numerous seeps emerge and slumps have occurred along Streams 2 and 3. Achieve at least partial suspension in this area. There are several small (4 acre) ponds in the north end of the unit (with no outlet). These should not be yarded across if possible. | | | |
| Wildlife | Field Review: H. Sloan, 7/27/93 | Office Review: M. Hall | |
| Bear and deer sign/use evident. Eagle's nest located within 1,500' of unit to the west. No other wildlife concerns. Level 1 structure retention. Timing restrictions on blasting will exist if road is laid out within 1/2 mile of active nest. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit not seen from any priority travel route or use area. Seen from West Coast Waterway in Foreground. Modification VQO. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Maintain 100' buffer on Class I and II streams at south boundary. Directionally fall trees from Class III stream on west side. Leave patches in bog/wet areas approximately 1/4 acre in size of small diameter and nonmerchantable trees. Type E. Maintain at least partial suspension in wet area. Mitigation measures for this unit are as follows: F3, F5, F6, F8, F10, W2, W8, and W10. | | | |

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

VCU : 592

UNIT : 408

QUAD : C5-SE



- Revised Control Lake Project Boundary
- Post-Field Unit Boundary w/ Setting Codes
- Other Post-Field Unit Boundaries
- USFS Timber Types for Volc 4-7
- Eagle Tree Buffer of 330ft
- Existing & Rebuilt Roads
- F.S. Roads Under Construction
- Post-Field Proposed Roads
- Ahmu-Class 1 & Stream Chantypes
- Ahmu-Class 2 & Stream Chantypes
- Ahmu-Class 3 & Stream Chantypes
- Channel Type Change

- Lakes and Ponds
- Second Growth Units
- MMI 4
- McGilvery > 41
- Landings
- Stream & Lake NoCUT Buffers

August 03, 1994

.5 MILE

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

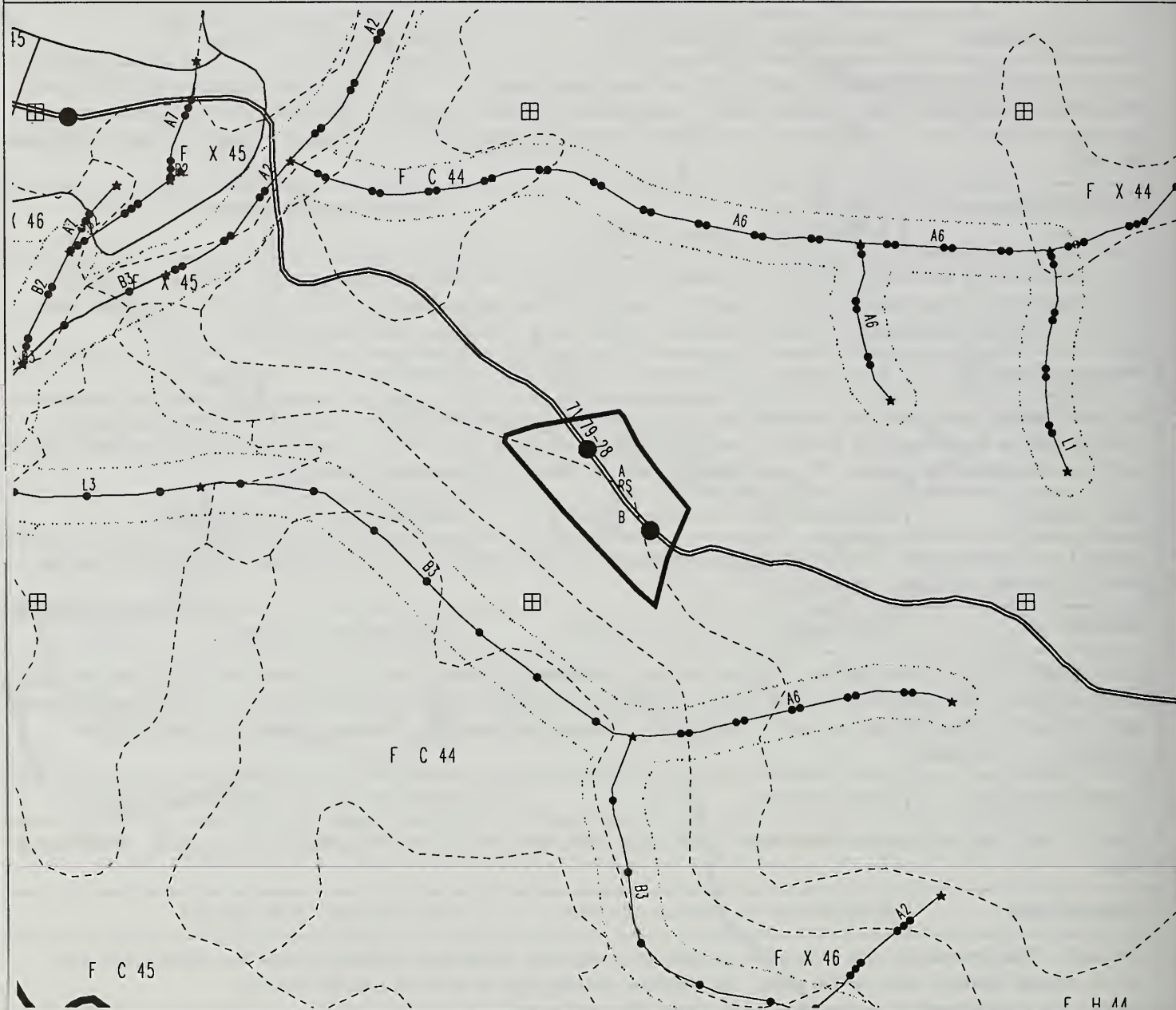
| | | | |
|---|---|---|--------------------------|
| VCU #: 592 | UNIT #: 408 | QUARTER QUAD: C5SE | PHOTO YR/#: 1991/790-141 |
| ACRES: 17.5 | VOL.: 325.6 MBF | LOGGING SYSTEM: Swingyarder/Running Skyline, Shovel | |
| LANDSCAPE ZONE: Unit is within Western Peninsula Late Successional Corridor. | | | |
| Timber/Vegetation | Field Review: J. Miller | Office Review: J. Goering | |
| Species composition predominantly hemlock but includes some spruce and cedar. Regeneration predominantly hemlock and includes some spruce but is lacking cedar. Fairly dense understory vegetation. Extreme fluting evident on many hemlock and some cedar. Light amount of mistletoe infection evident in canopy. Windthrow damage evident throughout the unit. | | | |
| Logging/Transportation | Field Review: E. DeWilde/T. Hoshall, 8/23/93 | Office Review: K. Martin | |
| Unit is accessed by Road #72-78-13.3. Recommend shovel yarding on west and swing yarding the rest. A 200 foot buffer to north contains most of the good timber. Another 200 foot stream buffer is on the east. The south and west sides have 500 foot ocean buffers. Fair economics. Partial cut not feasible due to steep slopes. | | | |
| Watershed/Fisheries | Field Review: G. Jackson, 7/09/93 | Office Review: G. McNaughton | |
| A Class I stream enters unit on the northwest corner and continues into the unit for about 800'. It branches into two streams with no significant fish barriers - part of it has been dammed by beavers. A stream on the north and east side of unit has coho and dolly varden. The unit boundary will be defined by the buffer in this area. | | | |
| Soils/Geology | Field Review: G. Jackson, 7/09/93 | Office Review: G. McNaughton | |
| Gentle to moderate slopes. McGilvery soils in central part of unit. Partial suspension yarding is required only on the small hill in the central part of the unit. | | | |
| Wildlife | Field Review: C. Confer, 7/09/93 | Office Review: M. Hall | |
| Good wildlife habitat. Bear and deer sign/use evident. Woodpecker feeding cavity(ies) identified. Three inactive eagle nests northwest, west, and south of unit. Unit is outside 330' buffers. Retain Level 1 structure. Timing restrictions will apply if road is within 1/2 mile of any of these nests. Surveyed for murrelets - presence observed. Surveyed for goshawks - no response. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit not seen from any priority travel route or use area. Seen from West Coast Waterway in Foreground. Modification VQO. | | | |
| Cultural/Lands | Field Review: B. Damone, 8/13/93 | Office Review: T.W. Greiser | |
| Cultural - Unit inventoried due to location partially or completely within high probability area for cultural resources. Avoid cultural resource sites on the coast. Recommend moving logs to adjacent unit for hauling. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Unit is within western area corridor. Southwest corner of unit dropped for non - CFL low volume. Northern portion of unit was deleted due to buffers, McGilvery soils, and loggability (access). During final layout ensure that unit maintains eagle nest buffer to the south. Type B clearcut. Partial cutting not very feasible due to windthrow, mistletoe, and steep slopes. Maintain 200' no cut buffer along Class I streams north and east of unit. Mitigation measures for this unit are as follows: F5, F8, F10, W4, W8, and W12. | | | |

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

VCU : 592

UNIT : 409

QUAD : C5-SE



- Revised Control Lake Project Boundary
- Post-Field Unit Boundary w/ Setting Codes
- Other Post-Field Unit Boundaries
- USFS Timber Types for Volc 4-7
- Eagle Tree Buffer of 330ft
- Existing & Rebuilt Roads
- F.S. Roads Under Construction
- Post-Field Proposed Roads
- Ahmu-Class 1 & Stream Chantypes
- Ahmu-Class 2 & Stream Chantypes
- Ahmu-Class 3 & Stream Chantypes
- Channel Type Change

- Lakes and Ponds
- Second Growth Units
- MMI 4
- McGilvery > 41
- Landings
- Stream & Lake NoCUT Buffers

May 16, 1994

.5 MILE

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

| | | | |
|---|---|---|--------------------------|
| VCU #: 592 | UNIT #: 409 | QUARTER QUAD: C5SE | PHOTO YR/#: 1991/790-141 |
| ACRES: 6.6 | VOL.: 170.2 MBF | LOGGING SYSTEM: Swingyarder/Running Skyline | |
| LANDSCAPE ZONE: Unit is within Western Peninsula Late Successional Corridor. | | | |
| Timber/Vegetation | Field Review: M. Case, 8/9/93 | Office Review: J. Goering | |
| Species composition predominantly hemlock and cedar but a few spruce are present. Predominantly hemlock regeneration. Light to poor spruce and very poor redcedar regeneration. Light amount of mistletoe infection evident in canopy in the north section. Extensive stem decay evident in the cedar. Rock bluffs on the higher elevations of the unit. Some poor soil drainage areas in the north portion of the unit. Rocky, relatively thin soils in the south portion of the unit. Promote spruce regeneration through planting. | | | |
| Logging/Transportation | Field Review: E. Dewilde/C. Giles, 8/06/93 | Office Review: K Jehnke | |
| Unit is accessed by Road #71-79-28. A swingyarder with running skyline is recommended. Ninety percent is uphill yarding. The area that required partial suspension was deleted due to inaccessibility and low volume of timber. Partial suspension is possible on half of the unit (not required). Tailholds are poor and may need tie-backs. Partial cut is not feasible. Poor economics. | | | |
| Watershed/Fisheries | Field Review: R. Romey, 7/28/93 | Office Review: T. Stewart | |
| No stream in unit as designed. | | | |
| Soils/Geology | Field Review: R. Rogers, 7/28/93 | Office Review: T. Stewart | |
| Partial suspension of steep slopes and bluffs below 200' elevation on southwest side of unit. | | | |
| Wildlife | Field Review: A. Sullivan, 7/28/93 | Office Review: R. Fairbanks | |
| Bear and deer sign/use evident. Retain Level 1 structure. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit not seen from any priority travel route or use area. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Unstable areas on southwest side of unit excluded. No streams within unit. Type B clearcut. Mitigation measures for this unit are as follows: F1, F8, and W4. | | | |

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

VCU : 592

UNIT : 410

QUAD : C5-SE



- Revised Control Lake Project Boundary
- Post-Field Unit Boundary w/ Setting Codes
- Other Post-Field Unit Boundaries
- USFS Timber Types for Volc 4-7
- Eagle Tree Buffer of 330ft
- Existing & Rebuilt Roads
- F.S. Roads Under Construction
- Post-Field Proposed Roads
- Ahmu-Class 1 & Stream Chantypes
- Ahmu-Class 2 & Stream Chantypes
- Ahmu-Class 3 & Stream Chantypes
- Channel Type Change

- Lakes and Ponds
- Second Growth Units
- MMI 4
- McGilvery > 41
- Landings
- Stream & Lake NoCUT Buffers

June 09, 1994

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

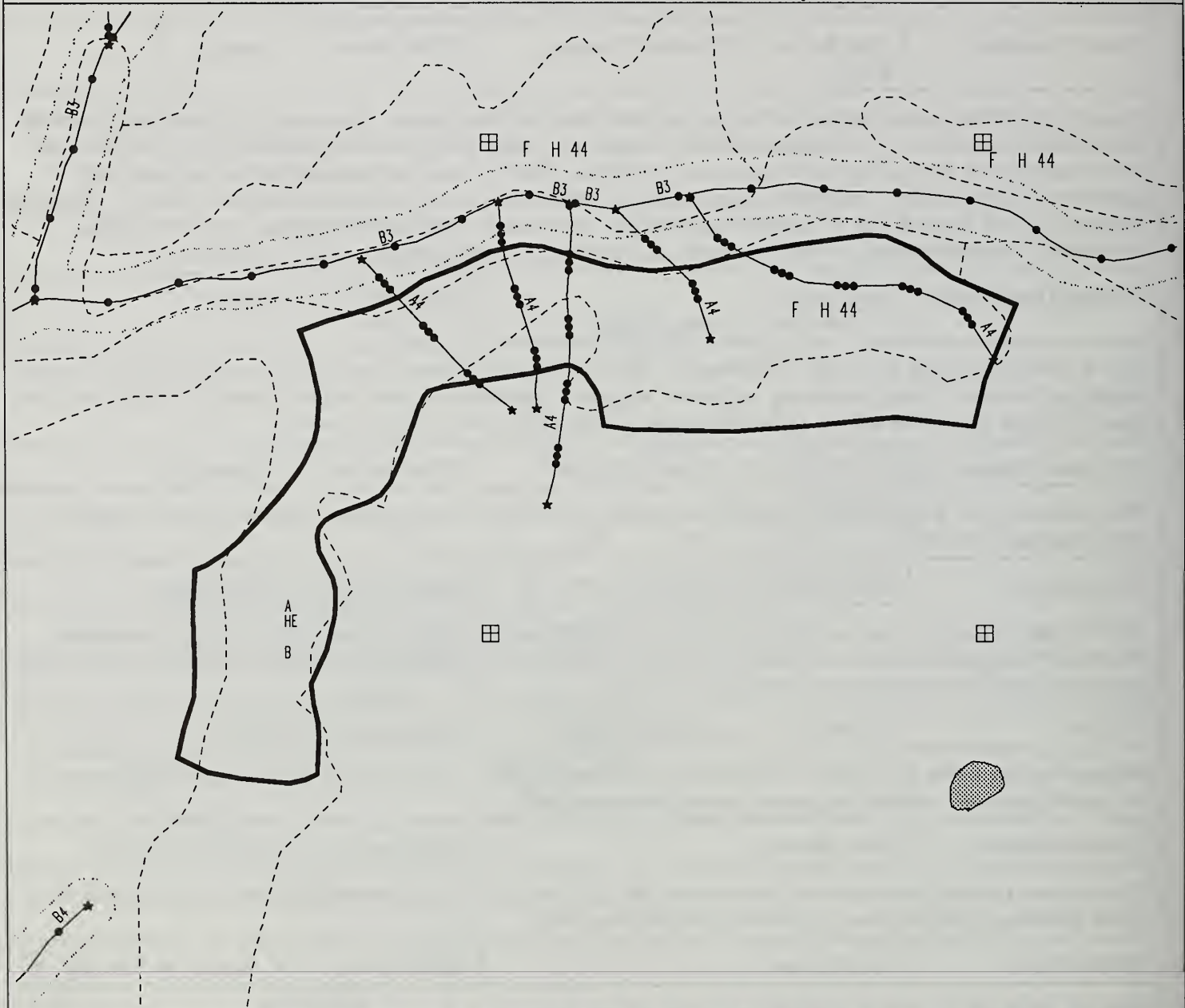
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|---|---|---|--------------------------|
| VCU #: 592 | UNIT #: 410 | QUARTER QUAD: C5SE | PHOTO YR/#: 1991/790-141 |
| ACRES: 22.9 | VOL.: 374.3 MBF | LOGGING SYSTEM: Swingyarder/Running Skyline, Shovel | |
| LANDSCAPE ZONE: South half of unit is within Western Peninsula Late Successional Corridor. | | | |
| Timber/Vegetation | Field Review: G. Hedin/J. Goering, 8/7/93 | Office Review: J. Goering | |
| Species composition predominantly hemlock but includes cedar and some spruce. Regeneration predominantly hemlock but includes some spruce. Fairly dense understory vegetation. Steep, rocky, relatively shallow soils in the north, and fairly unstable rock slope in the northeast portion. Moderate amount of mistletoe infection evident in canopy and understory. Big V-notches, unstable slope areas and rock bluffs into a steep canyon on the eastern boundary. Harvest all mistletoe infected hemlock and cut infected regeneration. Recommend partial retention buffers near slope breaks/ V-notches in northeast portion. Promote spruce/cedar regeneration through planting and/or seed trees. | | | |
| Logging/Transportation | Field Review: E. DeWilde/D. Keister, 8/05/93 | Office Review: J. Doyal | |
| Unit is accessed by Road #71-79-28.1 and Road #71-79-28. Recommend swing yarding with running skyline and shovel logging in flat areas. Partial suspension will not be achieved. Guys and tailholds will need tie-backs. Partial cut is not practical. Area of unstable soils to south and SE was excluded from unit. Poor economics. | | | |
| Watershed/Fisheries | Field Review: R. Rogers, 7/28/93 | Office Review: G. McNaughton | |
| 100' buffer on Class I stream on southeast unit boundary. West to east flowing stream in center of unit is Class III - directional fall, split yard. | | | |
| Soils/Geology | Field Review: R. Rogers, 7/28/93 | Office Review: G. McNaughton | |
| Exclude area of unstable slopes as shown on overlay. <u>Active Fault Zone</u> crosses Class I stream. Recent movement evidenced by aggrading channel morphology. Partially buried trees in channel present unique opportunity to study local earthquake hazard utilizing dendochronology. | | | |
| Wildlife | Field Review: A. Sullivan, 7/28/93 | Office Review: M. Hall | |
| Moderate to heavy deer use in unit. Bear den in the southwest portion. Retain Level 2 structure due to narrowness of old-growth patch and naturally fragmented matrix surrounding unit. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit not seen from any priority travel route or use area. Northern tip of post-field boundary may be visible from West Coast Waterway in Middleground. Maximum Modification VQO. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| South southeast portion of unit dropped to exclude bluffs and instability. Type B clearcut with 150' unmerchantable timber buffers. Maintain 100' buffer on Class II stream in south end of unit, and on Class I along east boundary. Mitigation measures for this unit are as follows: F1, F6, F8, and W4. | | | |

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

VCU : 592

UNIT : 411

QUAD : C4-SW



- Revised Control Lake Project Boundary
- Post-Field Unit Boundary w/ Setting Codes
- Other Post-Field Unit Boundaries
- USFS Timber Types for Volc 4-7
- Eagle Tree Buffer of 330ft
- Existing & Rebuilt Roads
- F.S. Roads Under Construction
- Post-Field Proposed Roads
- Ahmu-Class 1 & Stream Chantypes
- Ahmu-Class 2 & Stream Chantypes
- Ahmu-Class 3 & Stream Chantypes
- Channel Type Change

- Lakes and Ponds
- Second Growth Units
- MMI 4
- McGilvery > 41

- Landings
- Stream & Lake NoCUT Buffers

May 16, 1994

.5 MILE

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

| | | | |
|---|---|---|-------------------------|
| VCU #: 592 | UNIT #: 411 | QUARTER QUAD: C4SW | PHOTO YR/#: 1991/790-24 |
| ACRES: 53.3 | VOL.: 824.5 MBF | LOGGING SYSTEM: Helicopter | |
| LANDSCAPE ZONE: Unit is within Western Peninsula Central Area. | | | |
| Timber/Vegetation | Field Review: B. Hasebe/J. Goering, 8/9/93 | Office Review: J. Goering | |
| <p>Species composition predominantly hemlock and cedar but a few spruce are present. Regeneration predominantly hemlock but includes some cedar and spruce. Fairly dense understory vegetation and salal is present throughout. Moderately low volume, multi-species, multi-canopy stand with < 50% canopy closure and relatively low site productivity in the south and southeast portions. Northern half has higher volume/site index and drops into a canyon on the northern boundary. Numerous V-notches develop quickly and become very deep after the slope break on the northern boundary. Consider partial retention harvest to promote regenerative success, slope stability and desirable species composition.</p> | | | |
| Logging/Transportation | Field Review: E. DeWilde/D. Keister, 7/30/93 | Office Review: M. Whitty | |
| <p>Field engineers determined that roading costs to access this unit are excessive. Recommend helicopter yarding to unit #592-410. Flight slope is -4%. Maximum flight distance is 4700 feet. Poor economics. A buffer is flagged on the north boundary.</p> | | | |
| Watershed/Fisheries | Field Review: J. Metzler, 7/28/93 | Office Review: G. McNaughton | |
| <p>A Class I stream borders the north side of the unit and requires a 100' buffer. It is located within a fault and appears to be aggrading due to decreased gradient from uplift. Five Class III streams flow north through the unit. These should be split yarded. Alluvial fans at bottom indicate (vegetated) past active transport and erosion.</p> | | | |
| Soils/Geology | Field Review: J. Metzler, 7/28/93 | Office Review: G. McNaughton | |
| <p>Steep slopes along fault in north end do not show evidence of instability. Achieve partial suspension where slopes exceed 60%.</p> | | | |
| Wildlife | Field Review: H. Sloan, 7/28/93 | Office Review: M. Hall | |
| <p>Level 1 structure retention. Naturally highly fragmented area.</p> | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| <p>Unit not seen from any priority travel route or use area.</p> | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| <p>Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit.</p> | | | |
| Interdisciplinary Team Recommendations | | | |
| <p>Type B clearcut to protect advanced regeneration and meet slope stability concerns. Special felling objective is to protect all advanced regeneration. Maintain spruce and cedar for leave trees. Directionally fall trees away from advanced regeneration and all streams in unit. Maintain 100' buffer on Class I stream north of unit. Helicopter yarding will achieve suspension requirements. Mitigation measures for this unit are as follows: F2, F5, F6, T1, and W4.</p> | | | |

NO UNIT MAP
UNIT DROPPED OR DEFERRED

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

| | | | |
|---|------------------------------------|---|-------------------------|
| VCU #: 592 | UNIT #: 412 | QUARTER QUAD: | PHOTO YR/#: 1991/790-23 |
| ACRES: | VOL.: | LOGGING SYSTEM: | |
| LANDSCAPE ZONE: | | | |
| Timber/Vegetation | Field Review: J. Gaehring | Office Review: | |
| Stand less than 8,000 BF/AC. High Pinus Contorta component. High Salal components - regeneration concerns. | | | |
| Logging/Transportation | Field Review: | Office Review: | |
| | | | |
| Watershed/Fisheries | Field Review: R. Rogers, 7/22/93 | Office Review: | |
| No stream; no concerns | | | |
| Soils/Geology | Field Review: R. Rogers, 7/22/93 | Office Review: | |
| No instability noted; no concerns. | | | |
| Wildlife | Field Review: A. Sullivan, 7/22/93 | Office Review: M. Hall | |
| Heavily utilized by deer at trails, beds, forage. Bear activity in muskegs immediately adjacent to unit. Level 1 structure retention. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit not seen from any priority travel route or use area. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | Reviewed By: | |
| Deferred due to non-CFL. | | | |

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

VCU : 592

UNIT : 413

QUAD : C4-SW



- Revised Control Lake Project Boundary
- Post-Field Unit Boundary w/ Setting Codes
- Other Post-Field Unit Boundaries
- USFS Timber Types for Volc 4-7
- Eagle Tree Buffer of 330ft
- Existing & Rebuilt Roads
- F.S. Roads Under Construction
- Post-Field Proposed Roads
- Ahmu-Class 1 & Stream Chantypes
- Ahmu-Class 2 & Stream Chantypes
- Ahmu-Class 3 & Stream Chantypes
- Channel Type Change

- Lakes and Ponds
- Second Growth Units
- MMI 4
- McGilvery > 41
- Landings
- Stream & Lake NoCUT Buffers

March 17, 1995

.5 MILE

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

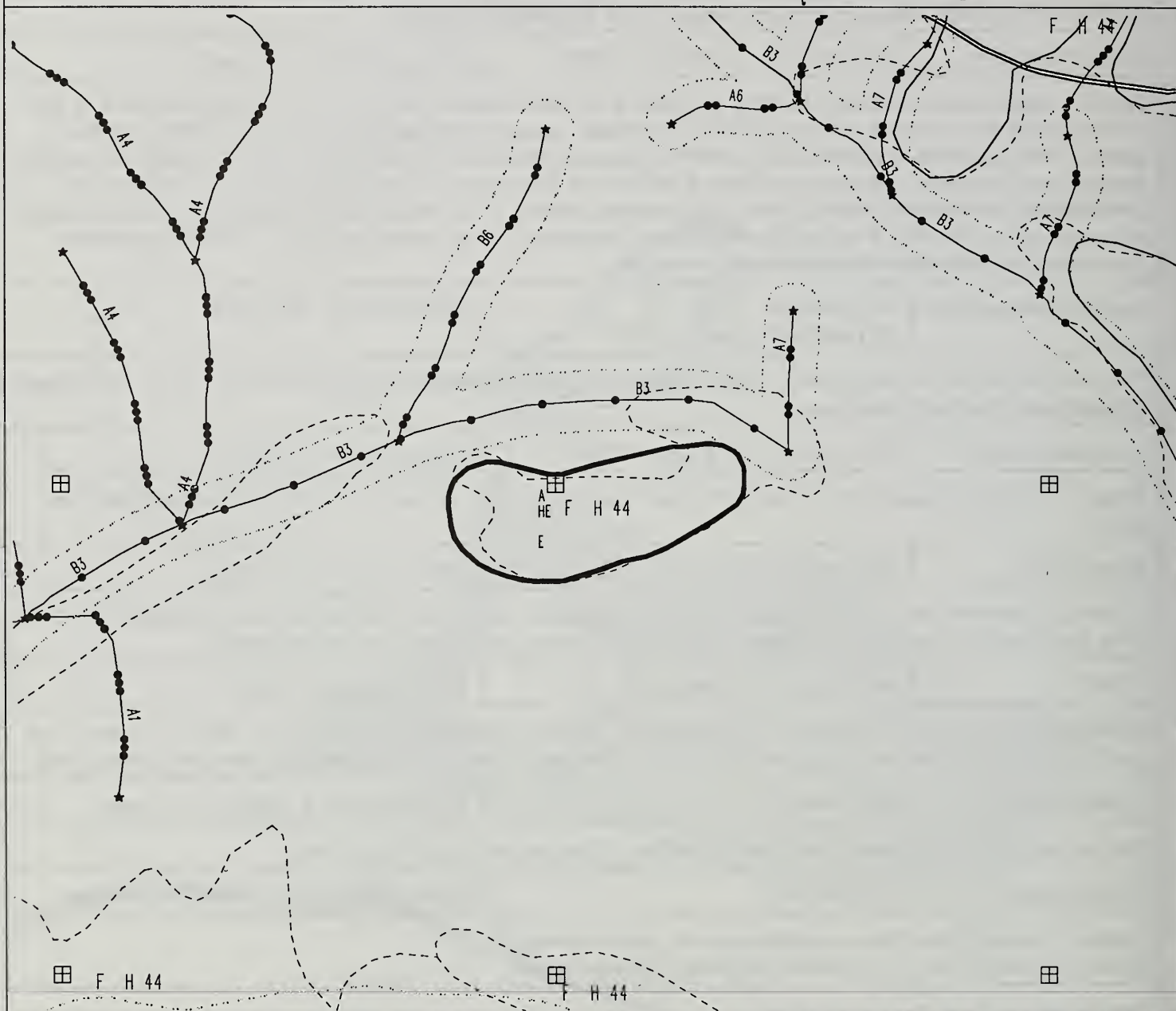
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|--|---|---|-------------------------|
| VCU #: 592 | UNIT #: 413 | QUARTER QUAD: C4SW | PHOTO YR/#: 1991/790-23 |
| ACRES: 18.3 | VOL.: 276.3 MBF | LOGGING SYSTEM: Helicopter | |
| LANDSCAPE ZONE: Unit is in Western Peninsula Late Successional Corridor. | | | |
| Timber/Vegetation | Field Review: T. Stecher, 8/19/93 | Office Review: J. Goering | |
| Species composition predominantly hemlock and cedar in the north portion. Moderately low volume stand with < 50% canopy closure & relatively low site productivity. Moderate amount of hemlock and cedar regeneration with a few spruce. Some regeneration concerns due to low site index and the presence of lodgepole and salal. Species composition predominantly hemlock but includes some spruce and cedar in the southern portion. Regeneration was plentiful and predominantly hemlock but included spruce in the southern section. The south portion had moderate volume and higher site productivity. No MMI-4 soils in this revised unit. Blowdown evident on the upper slopes. Windthrow potential limits partial retention feasibility for the southern section. | | | |
| Logging/Transportation | Field Review: E. Dewilde/D. Keister, 8/02/93 | Office Review: E. Urstadt | |
| This unit was not laid out due to lack of volume, presence of unstable soils and lack of guy and tail stumps. Recommend dropping unit. Very poor economics. | | | |
| Watershed/Fisheries | Field Review: R. Rogers, 7/22/93 | Office Review: T. Stewart | |
| Stream 1 is a Class II; needs 100' no-cut buffer due to slope instability. Stream 2 is a Class III; directional fall, split yard. | | | |
| Soils/Geology | Field Review: R. Rogers, 7/22/93 | Office Review: T. Stewart | |
| Exclude all areas east of stream and south of waterfalls due to extremely unstable slopes underlain by glacial till; MMI-4. Drop area south of upper falls along channel due to unstable slopes underlain by glacial till, MMI-4. | | | |
| Wildlife | Field Review: A. Sullivan, 7/22/93 | Office Review: M. Hall | |
| Moderate deer use in unit. Bear limited - sign identified. Marten sighted below unit boundary. Many otter dens along coast. Eagle nests below unit (along coastline 1/8 mile from unit), although no nests sighted immediately south of unit. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit not seen from any priority travel route or use area. Proximity and visuals from ocean. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Boundary significantly modified to avoid MMI4 soils. Class II stream needs a 100' no-cut buffer due to slope stability concerns. Beach fringe no-cut buffer of 500' is required. Directional fall from Class III stream. Type C clearcut. Mitigation measures include: F1, F2, F3, F5, F6, and W3. | | | |

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

VCU : 592

UNIT : 414

QUAD : C4-SW



- Revised Control Lake Project Boundary
- Post-Field Unit Boundary w/ Setting Codes
- Other Post-Field Unit Boundaries
- USFS Timber Types for Volc 4-7
- Eagle Tree Buffer of 330ft
- Existing & Rebuilt Roads
- F.S. Roads Under Construction
- Post-Field Proposed Roads
- Ahmu-Class 1 & Stream Chantypes
- Ahmu-Class 2 & Stream Chantypes
- Ahmu-Class 3 & Stream Chantypes
- Channel Type Change

- Lakes and Ponds
- Second Growth Units
- MMI 4
- McGilvery > 41
- Landings
- Stream & Lake NoCUT Buffers

0.5 MILE

May 16, 1994

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

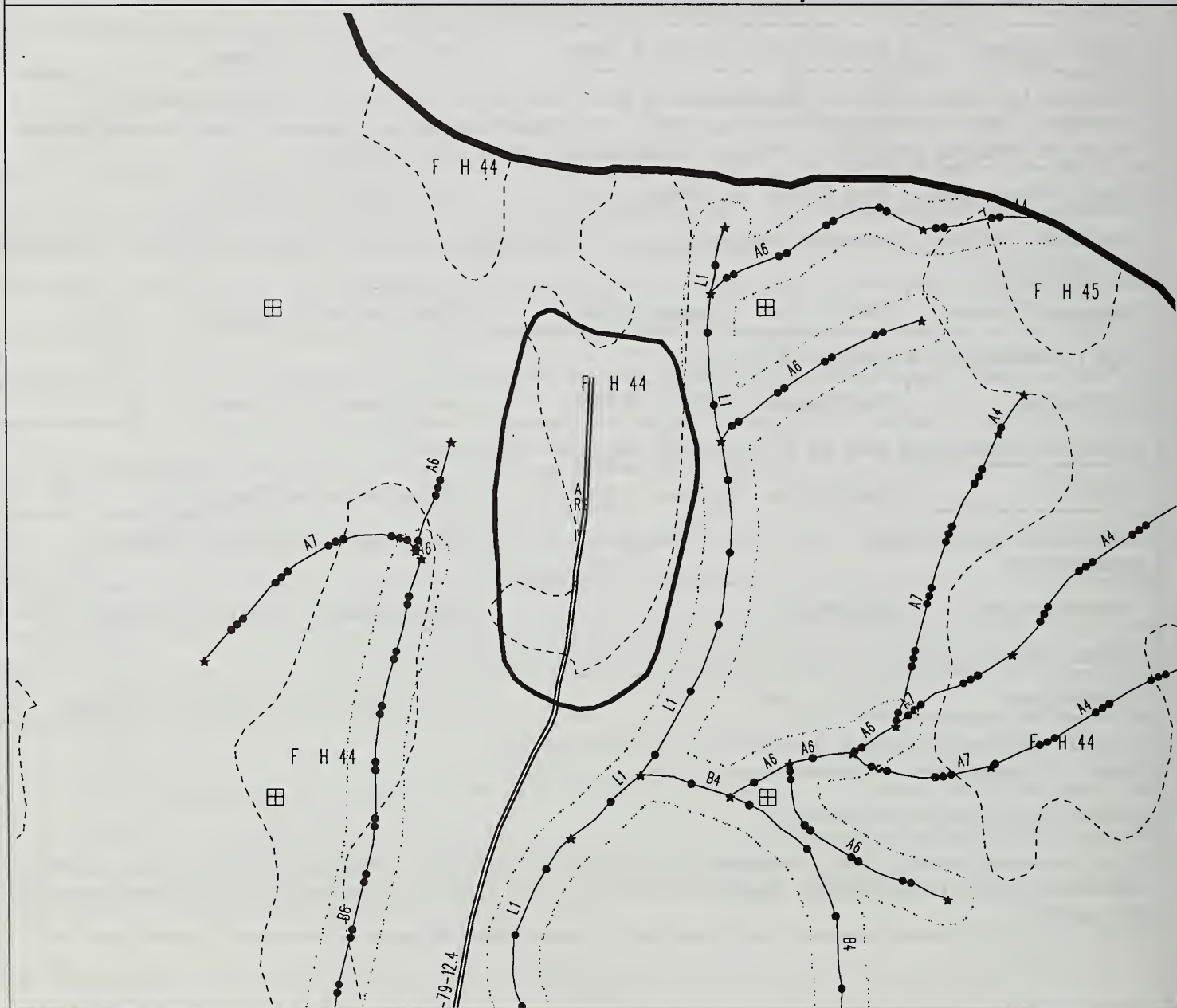
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|---|-----------------------------------|---|-------------------------|
| VCU #: 592 | UNIT #: 414 | QUARTER QUAD: C4SW | PHOTO YR/#: 1991/790-24 |
| ACRES: 10.7 | VOL.: 125.7 MBF | LOGGING SYSTEM: Helicopter | |
| LANDSCAPE ZONE: Unit is in Western Peninsula Late Successional Corridor. | | | |
| Timber/Vegetation | Field Review: G. Hedin, 8/13/93 | Office Review: J. Goering | |
| Moderately low volume, mixed species, multi-canopy stand with < 50% canopy closure. Relatively low site productivity. Species composition hemlock and cedar. Poor hemlock and spruce regeneration due to poor soil drainage. Analyze for feasibility given the low site index, small size, and low volume of the stand. | | | |
| Logging/Transportation | Field Review: E. DeWilde, 8/03/93 | Office Review: M. Whitty | |
| Road access is difficult. Recommend helicopter logging. Flight distance is 5900 feet. Flight slope is level. Use landing in Unit 592-410. | | | |
| Watershed/Fisheries | Field Review: J. Metzler, 7/28/93 | Office Review: T. Stewart | |
| Class I stream north of unit requires 100' buffer. | | | |
| Soils/Geology | Field Review: J. Metzler, 7/28/93 | Office Review: T. Stewart | |
| Some short, broken bluffs along top line (south end), but no instability evident. | | | |
| Wildlife | Field Review: H. Sloan, 7/28/93 | Office Review: M. Hall | |
| Bear and deer sign/use evident. Level 1 structure retention. The only isolated patch of merchantable timber in immediate area. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit not seen from any priority travel route or use area. Maximum Modification VQO. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Type E overstory removal. Partial suspension required to protect regeneration. Marginal helicopter unit due to 5500-6400' flight distance to unit 592-410. Maintain 100' buffer on Class I stream north of unit. Mitigation measures are F2, F5, and W2. | | | |

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

VCU : 593

UNIT : 401

QUAD : C4-NW



- Revised Control Lake Project Boundary
- Post-Field Unit Boundary w/ Setting Codes
- Other Post-Field Unit Boundaries
- USFS Timber Types for Volc 4-7
- Eagle Tree Buffer of 330ft
- Existing & Rebuilt Roads
- F.S. Roads Under Construction
- Post-Field Proposed Roads
- Ahmu-Class 1 & Stream Chantypes
- Ahmu-Class 2 & Stream Chantypes
- Ahmu-Class 3 & Stream Chantypes
- Channel Type Change

- Lakes and Ponds
- Second Growth Units
- MMI 4
- McGilvery > 41

- Landings
- Stream & Lake NoCUT Buffers

.5 MILE

May 16, 1994

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

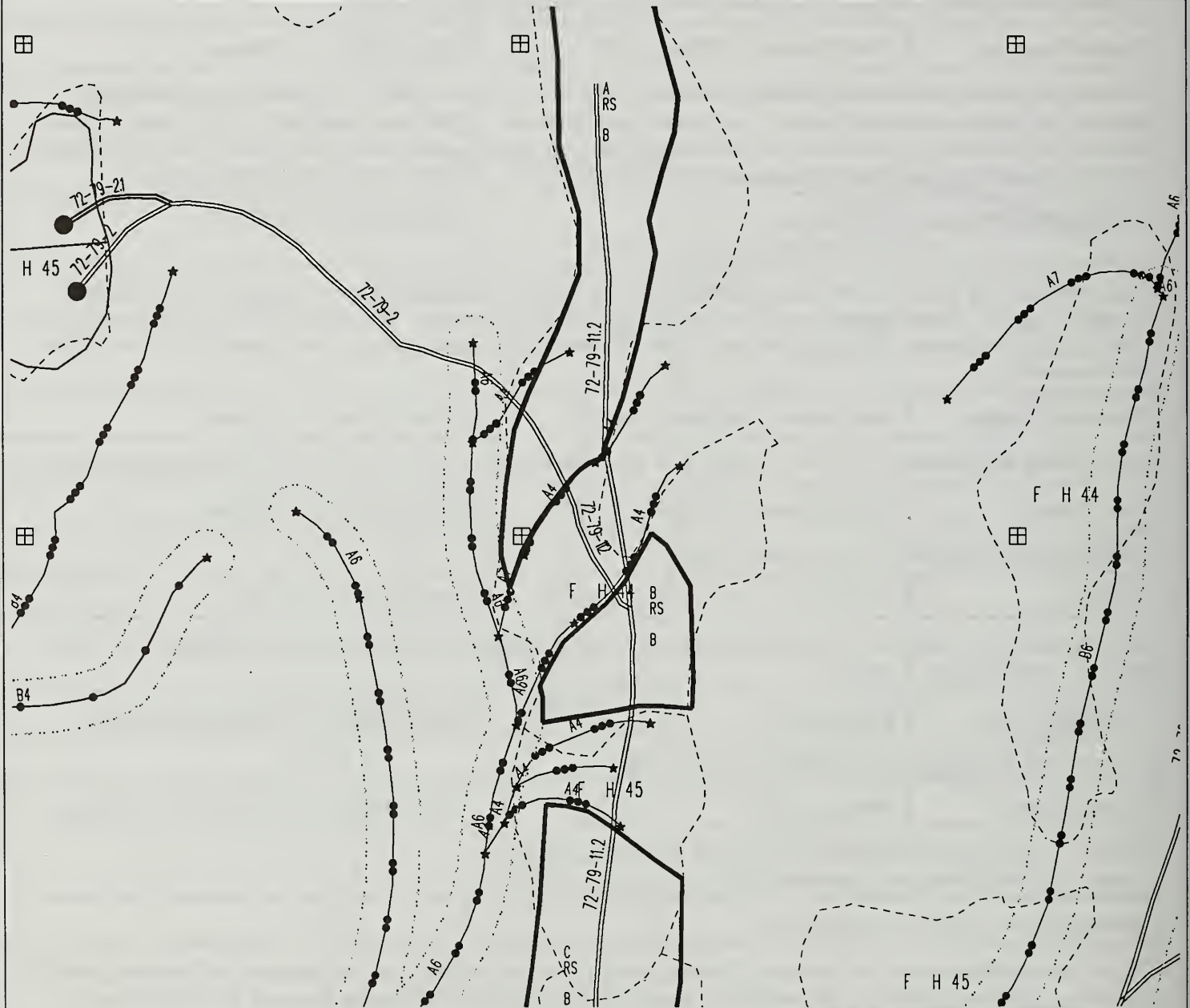
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|---|--|---|--------------------------|
| VCU #: 593 | UNIT #: 401 | QUARTER QUAD: C4NW | PHOTO YR/#: 1991/1990-78 |
| ACRES: 24.2 | VOL.: 258.1 MBF | LOGGING SYSTEM: Swingyarder/Running Skyline | |
| LANDSCAPE ZONE: Unit is within Eleven-Mile Creek Late Successional Corridor. | | | |
| Timber/Vegetation | Field Review: J. Miller, 8/5/93 | Office Review: J. Goering | |
| Species composition predominantly hemlock and cedar but a few spruce are present. Regeneration predominantly hemlock but includes cedar and spruce. Low volume, mixed-species, multi-canopy stand with < 50% canopy closure and low site productivity in the north and south ends of the unit. Poor regeneration in the northeast corner possibly due to snow damage/poor site effects. Regeneration concerns due to low site index soils in the northeast portion. | | | |
| Logging/Transportation | Field Review: B. Wilkinson/J. Graves, 8/12/93 | Office Review: M. Whitty | |
| Unit is accessed by Road #72-79-12.4. Recommend swing yard using running skyline or highlead. Sixty percent is downhill logging. Partial suspension will not be achieved and is not required. Partial cut is not practical due to lack of "lift". A 100 foot stream buffer is on the east edge. The north tip of paper plan unit was deleted due to poor timber. Fair economics. | | | |
| Watershed/Fisheries | Field Review: B. Romey, 8/03/93 | Office Review: J. Knutzen | |
| Stream along SE boundary is a Class I, flagged B/W along upper half but needs 100' TTRA buffer along entire length. | | | |
| Soils/Geology | Field Review: M. Minnillo, 8/03/93 | Office Review: J. Knutzen | |
| Little evidence of instability. Fairly gentle slopes. | | | |
| Wildlife | Field Review: M. Minnillo, 8/03/93 | Office Review: M. Hall | |
| Wildlife sign low to moderate with fairly high used deer trail at bottom of unit. Keep east unit boundary away from muskegs. Retain Level 1 structure. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit not seen from any priority travel route or use area. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Type I group selection with the objective of yarding away from areas of acceptable regeneration and addressing wildlife concerns. Southeast portion of unit needs 100' stream buffer verification. Mitigation measures for this unit are as follows: F4, F5, F8, F10 and W2. | | | |

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

VCU : 593

UNIT : 402

QUAD : C4-NW



- Revised Control Lake Project Boundary
- Post-Field Unit Boundary w/ Setting Codes
- Other Post-Field Unit Boundaries
- USFS Timber Types for Volc 4-7
- Eagle Tree Buffer of 330ft
- Existing & Rebuilt Roads
- F.S. Roads Under Construction
- Post-Field Proposed Roads
- Ahmu-Class 1 & Stream Chantypes
- Ahmu-Class 2 & Stream Chantypes
- Ahmu-Class 3 & Stream Chantypes
- Channel Type Change

- Lakes and Ponds
- Second Growth Units
- MMI 4
- McGilvery > 41

- Landings
- Stream & Lake NoCUT Buffers

May 16, 1994

.5 MILE

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

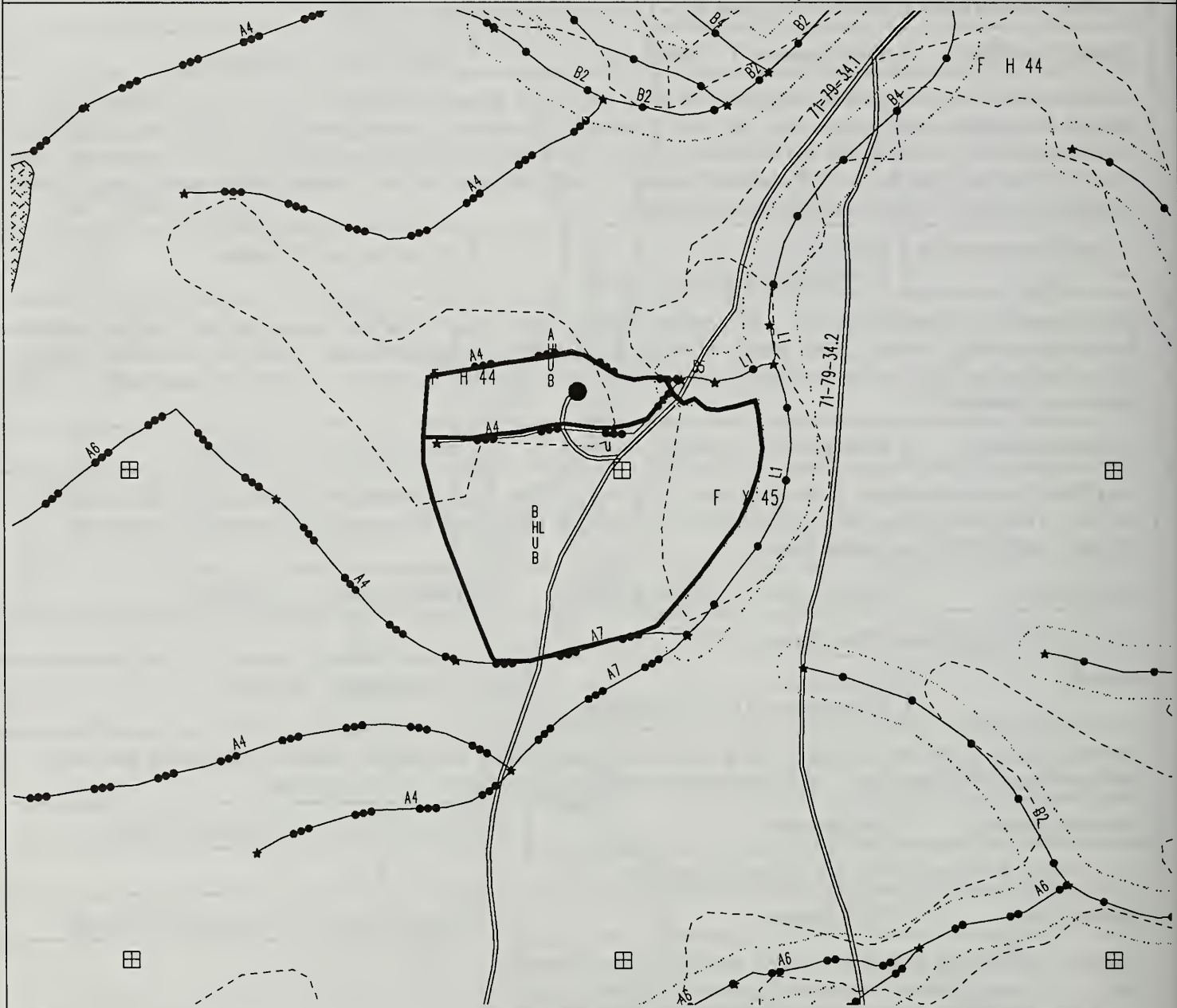
| | | | |
|--|--|---|--------------------------|
| VCU #: 593 | UNIT #: 402 | QUARTER QUAD: C4NW | PHOTO YR/#: 1991/1990-78 |
| ACRES: 46.9 | VOL.: 722.6 MBF | LOGGING SYSTEM: Swingyarder/Running Skyline | |
| LANDSCAPE ZONE: Unit is within Eleven-Mile Creek Late Successional Corridor. | | | |
| Timber/Vegetation | Field Review: T. Stecher, 8/5/93 | Office Review: J. Goering | |
| Species composition predominantly hemlock with some cedar. Few spruce are present. Regeneration predominantly hemlock but includes some spruce and a few cedar (candidate for release). Low volume with < 50% canopy closure and low site productivity in south end and the middle portion. Rock bluffs on the higher elevations of the unit (eastern side) should be removed from the unit. Windthrow damage evident throughout the unit. Alaska yellow cedar decline evident throughout the unit. Dead, are mostly unmerchantable. | | | |
| Logging/Transportation | Field Review: B. Wilkinson/J. Graves, 8/09/93 | Office Review: K. Jehnke | |
| Unit is accessed by Road #72-79-11.2. Recommend yarding with a swing yarder and running skyline. Partial suspension is required on slopes > 60%. Fifty percent of this area can achieve partial suspension. Partial cut not feasible, due to lack of suspension. Run-out for downhill yarding is short in places. Fair economics. A 100 foot stream buffer is on the center-west boundary. | | | |
| Watershed/Fisheries | Field Review: J. Metzler, 8/03/93 | Office Review: T. Stewart | |
| Two Class IIa streams adjacent to the unit require 100' buffer. Ten Class III tributaries require directional falling, split yarding. The V-notch along the north boundary is very deeply incised and the inner gorge is unstable - keep north boundary south of the topographic break. | | | |
| Soils/Geology | Field Review: J. Metzler 8/03/93 | Office Review: T. Stewart | |
| Achieve partial suspension where slopes > 60%. | | | |
| Wildlife | Field Review: J. Metzler/M. Minnillo, 8/03/93 | Office Review: M. Hall | |
| Evidence of heavy deer use, especially along west-facing slopes. Two adult eagles observed flying out of trees near middle of unit. High deer sign. Wolf and bear sign also identified. Retain Level 1 structure. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit not seen from any priority travel route or use area. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Maintain 100' buffers on Class II stream on west of unit. Achieve partial suspension where slopes are > 60%. Partial suspension is only possible over 1/2 of the area having > 60% slope. Buck logs to 16' plus trim multiples to achieve partial suspension in remainder of unit. Use retention corridors with boundaries maintained 50' from streams. Two narrow areas between Class III streams excluded from unit. Type B and D clearcut. Mitigation measures for this unit are as follows: F1, F3, F5, F6, F8, F10, W1, and W4. | | | |

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

VCU : 593

UNIT : 403

QUAD : C4-NW



- Revised Control Lake Project Boundary
- Post-Field Unit Boundary w/ Setting Codes
- Other Post-Field Unit Boundaries
- USFS Timber Types for Volc 4-7
- Eagle Tree Buffer of 330ft
- Existing & Rebuilt Roads
- F.S. Roads Under Construction
- Post-Field Proposed Roads
- Ahmu-Class 1 & Stream Chontypes
- Ahmu-Class 2 & Stream Chontypes
- Ahmu-Class 3 & Stream Chontypes
- Channel Type Change

- Lakes and Ponds
- Second Growth Units
- MMI 4
- McGilvery > 41
- Landings
- Stream & Lake NoCUT Buffers

August 08, 1994

.5 MILE

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

| | | | |
|--|--|---|-------------------------|
| VCU #: 593 | UNIT #: 403 | QUARTER QUAD: C4NW | PHOTO YR/#: 1991/790-10 |
| ACRES: 29.1 | VOL.: 707.1 MBF | LOGGING SYSTEM: Highlead | |
| LANDSCAPE ZONE: Unit is in western Peninsula Central area. | | | |
| Timber/Vegetation | Field Review: J. Miller, 7/19/93 | Office Review: J. Goering | |
| Species composition predominantly hemlock but includes some spruce and cedar. Regeneration predominantly hemlock but includes a few spruce. Windthrow damage present in southern section of unit. Alaska yellow-cedar decline evident. | | | |
| Logging/Transportation | Field Review: T. Wetzel/G. Slawson, 7/19/93 | Office Review: J. Doyal | |
| Unit is accessed by Road #71-79-34.1 and a short spur. Recommend using a 100 foot tower with highlead system. Slackline and shotgun systems will work if partial suspension is required. Partial cut is not practical due to downhill logging on steeper slopes. Bear den was observed. | | | |
| Watershed/Fisheries | Field Review: E. Ablow, 7/01/93 | Office Review: T. Stewart | |
| The main stream flowing north to south is a highly sinuous L1 stream with many braids and alcoves. The stream requires a 100' buffer and should be used as the eastern boundary (flagged B/W). Another stream flows west to east through the eastern quarter of the unit which requires 100' buffer for the lower 250' (L1 stream type). The remaining portion of this stream, before confluence with two upper tributaries requires 100' plus 50' selective cut buffer (B5 channel type). Both streams had coho, fry and trout. Recommend starting the eastern boundary where the stream forks. These tributary forks are Class III streams that are recommended to be split yarded. Stream that flows west to east was flagged B/W, while its two tributaries were flagged O/W. Also, recommend using southernmost tributary as the southern boundary. | | | |
| Soils/Geology | Field Review: E. Ablow, 7/01/93 | Office Review: T. Stewart | |
| Slope gradient is approximately 35%. The unit is stable and has no concerns. | | | |
| Wildlife | Field Review: H. Sloan, 7/01/93 | Office Review: M. Hall | |
| Retain Level 1 structure retention. Bear den located near center of unit near Class III streams. Flagged area with B/W and O/W - see overlay. Recommend wildlife island in this area. Eagle's nest located within 1500' of unit. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit is not visible from any priority travel routes or use areas. Maximum Modification VQO. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Boundary moved above lower Class I portion of Class III streams draining unit. Class I stream on east boundary requires 100' buffer. Additional 50' selective cut buffer required on upper half of the class I main channel draining through the eastern portion of unit. Split yard all Class III streams. Downhill yarding limits opportunity for selective harvest. Recommend Type B clearcut. Office review resulted moving access road west out of class I stream buffer, flagged route will require adjustment. Mitigation measures for this unit are as follows: F5, F6, F8, F10, and W4. | | | |

NO UNIT MAP
UNIT DROPPED OR DEFERRED

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

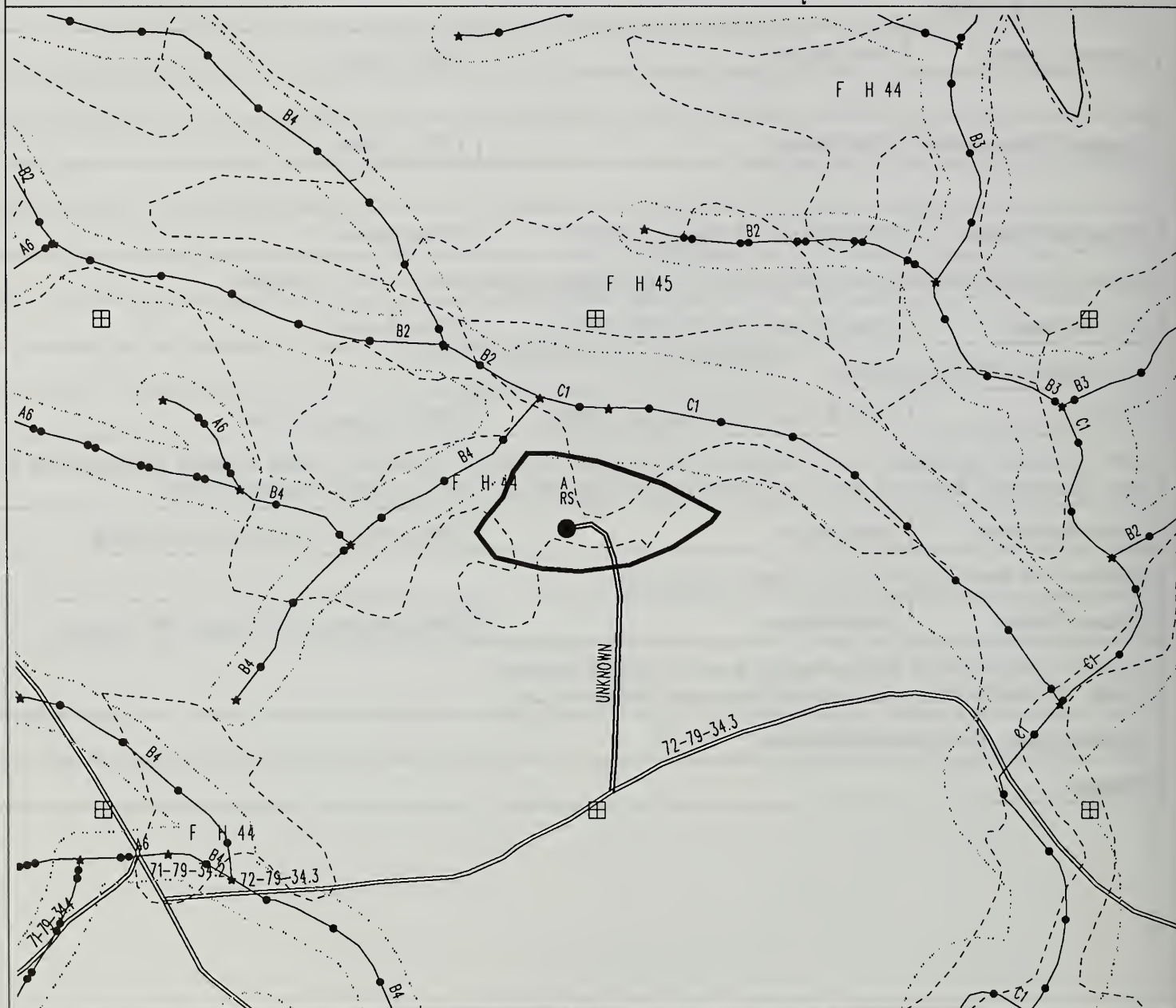
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|---|------------------------------------|---|-------------------------|
| VCU #: 593 | UNIT #: 404 | QUARTER QUAD: C4NW | PHOTO YR/#: 1990/78-FL5 |
| ACRES: | VOL.: | LOGGING SYSTEM: | |
| LANDSCAPE ZONE: | | | |
| Timber/Vegetation | Field Review: | Office Review: | |
| | | | |
| Logging/Transportation | Field Review: | Office Review: | |
| | | | |
| Watershed/Fisheries | Field Review: B. Rogers, 7/20/93 | Office Review: | |
| Stream 1 through middle at unit is B1, Class I with 200' buffer that excludes the unit. (Dropped) | | | |
| Soils/Geology | Field Review: M. Minnillo, 7/20/93 | Office Review: | |
| Low slopes; no stability concerns. | | | |
| Wildlife | Field Review: M. Minnillo, 7/20/93 | Office Review: M. Hall | |
| Unit is primarily all riparian zone. Heavily traveled by deer and wolves. Active beaver dam in stream through middle of unit. Recommend eagle nest survey of riparian zone through middle of unit. Level 1 structure retention. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit not seen from any priority travel route or use area. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Dropped. | | | |













CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD







VCU : 593

UNIT : 406

QUAD : C4-NW



-  Revised Control Lake Project Boundary
-  Post-Field Unit Boundary w/ Setting Codes
-  Other Post-Field Unit Boundaries
-  USFS Timber Types for Volc 4-7
-  Eagle Tree Buffer of 330ft
-  Existing & Rebuilt Roads
-  F.S. Roads Under Construction
-  Post-Field Proposed Roads
-  Ahmu-Class 1 & Stream Chantypes
-  Ahmu-Class 2 & Stream Chantypes
-  Ahmu-Class 3 & Stream Chantypes
-  Channel Type Change

-  Lakes and Ponds
 Second Growth Units
 MMI 4
 McGilvery > 41
 Landings
 Stream & Lake NoCUT Buffers

May 16, 1994

.5 MILE

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

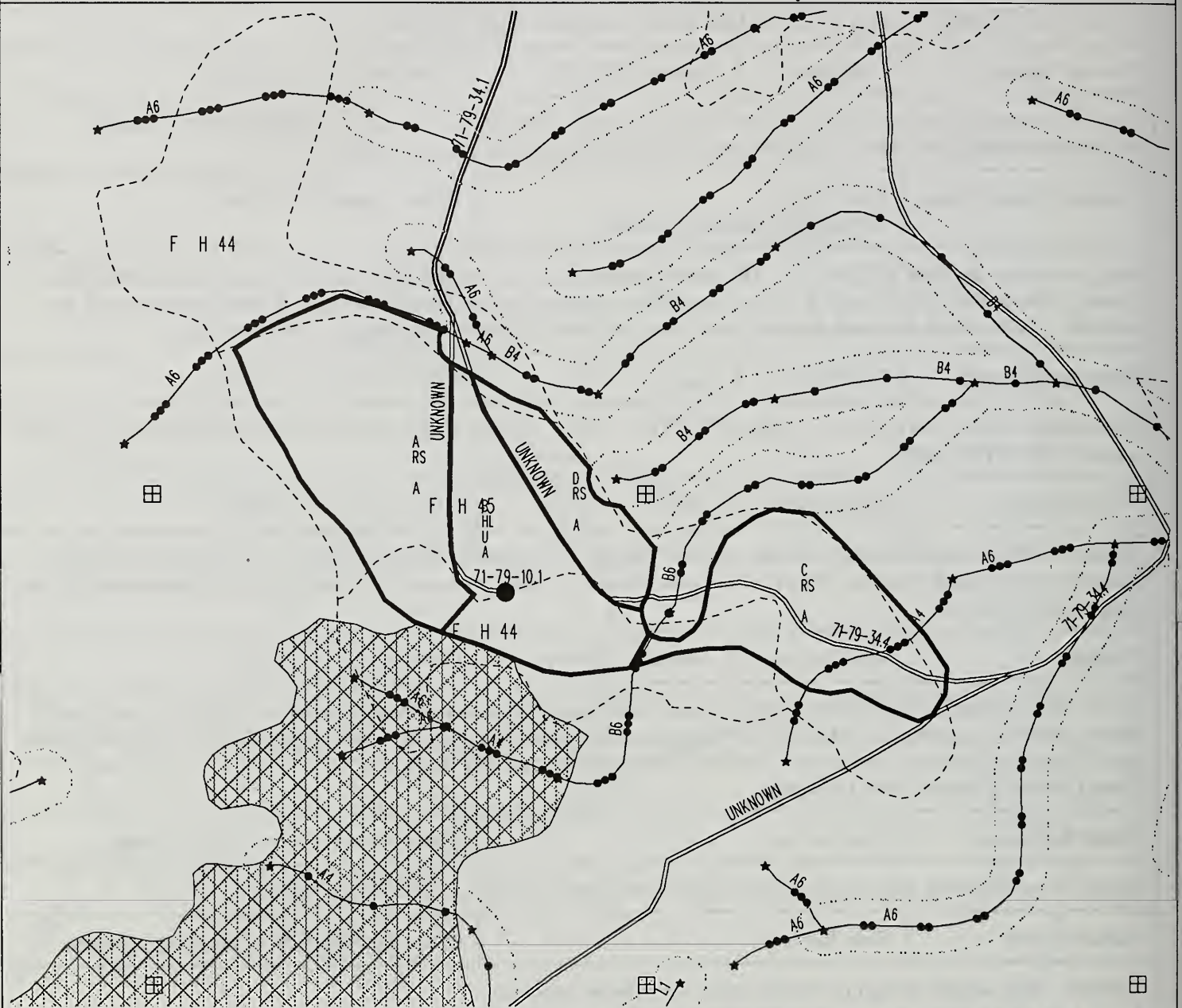
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|---|--|---|--------------------------|
| VCU #: 593 | UNIT #: 406 | QUARTER QUAD: C4NW | PHOTO YR/#: 1991/1990/77 |
| ACRES: 7.3 | VOL.: 228.5 MBF | LOGGING SYSTEM: Swingyarder/Running Skyline | |
| LANDSCAPE ZONE: Unit is in Eleven-Mile Creek Late Successional Corridor. | | | |
| Timber/Vegetation | Field Review: S. Karstens, 7/26/93 | Office Review: J. Goering | |
| Species composition predominantly hemlock with some cedar. Few spruce are present. Predominantly hemlock regeneration with a few cedar. Light amount of mistletoe infection evident in canopy. | | | |
| Logging/Transportation | Field Review: T. Wetzel/G. Slawson, 7/19/93 | Office Review: E. Urstadt | |
| Unit is accessed by Road #72-79-11.3. The paper plan boundary was modified to exclude the unit north of the Class I stream. This is due to high roading costs. Log with a swing yarder and running skyline. Partial suspension can be achieved. Tailholds on the south boundary may need tie-backs. Partial cut is feasible. Fair economics. | | | |
| Watershed/Fisheries | Field Review: B. Rogers, 7/20/93 | Office Review: T. Stewart | |
| Stream west of final unit is Class I - B/W, 100' TTRA buffer. Class I stream north of unit has C1 channel type and requires 200' TTRA buffer. | | | |
| Soils/Geology | Field Review: M. Minnillo, 7/20/93 | Office Review: T. Stewart | |
| Maintain unit boundary above slope-break on north side of Class I stream through unit due to steep slopes with small slides and much downed timber. Road crossing, as planned on map, may need to be moved west in order to avoid deep, steep, unstable slopes. | | | |
| Wildlife | Field Review: M. Minnillo, 7/20/93 | Office Review: M. Hall | |
| Heavy deer sign/use throughout area. Recommend Bald Eagle nest survey be completed prior to harvest. Recommend deleting narrow, southeast end of north part of unit to avoid harvesting potential and possibly already existing eagle nest trees. Select harvest trees greater than 15" DBH along muskegs for 100' from muskeg. Structure will be retained in Class I buffer. Retain Level 1 structure. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit is not visible from any priority travel routes or use areas. Maximum Modification VQO. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Northern part of paper plan unit removed due to non - CFL. Type E overstory removal taking trees 12" DBH and larger. Unit, as laid out, has only Class I stream on north boundary. Class I stream requires 200' no cut buffer. Class 1 stream located west of unit requires 100' no-cut buffer. Mitigation measures for this unit are as follows: F3, F5, F8, F10, and W2. | | | |













CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD







VCU : 593

UNIT : 407

QUAD : C4-NW



-  Revised Control Lake Project Boundary
-  Post-Field Unit Boundary w/ Setting Codes
-  Other Post-Field Unit Boundaries
-  USFS Timber Types for Volc 4-7
-  Eagle Tree Buffer of 330ft
-  Existing & Rebuilt Roads
-  F.S. Roads Under Construction
-  Post-Field Proposed Roads
-  Ahmu-Class 1 & Stream Chantypes
-  Ahmu-Class 2 & Stream Chantypes
-  Ahmu-Class 3 & Stream Chantypes
-  Channel Type Change

-  Lakes and Ponds
 Second Growth Units
 MMI 4
 McGilvery > 41
 Landings
 Stream & Lake NoCUT Buffers

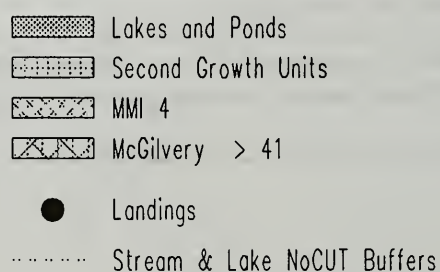
.5 MILE

May 16, 1994

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

| | | | |
|--|--|--|-------------------------|
| VCU #: 593 | UNIT #: 407 | QUARTER QUAD: C4NW | PHOTO YR/#: 1991/790-11 |
| ACRES: 45.9 | VOL.: 1113.4 MBF | LOGGING SYSTEM: Swingyard with 100' Tower/Highlead | |
| LANDSCAPE ZONE: Western Peninsula Central Area. | | | |
| Timber/Vegetation | Field Review: B. Hasebe, 7/20/93 | Office Review: J. Goering | |
| <p>Species composition predominantly hemlock but includes cedar and some spruce. Fairly dense understory vegetation. Regeneration predominantly hemlock but includes some spruce. Little to no mistletoe evident in canopy.</p> <p>Alaska yellow cedar decline evident. Low site index soils in eastern areas. Lower drainage's contain moderate volume, multi-storied yellow cedar with < 50% canopy closure. McGilvery soils present in southeast portion. Steep, unstable shallow soils, and rock bluffs within the south portion of the unit.</p> | | | |
| Logging/Transportation | Field Review: T. Wetzel/G. Slawson, 7/21/93 | Office Review: C. Barnhart | |
| <p>Unit is accessed by Road #71-79-10.1 and one spur. Recommend 100 foot tower using highlead on one setting. Swing yard the remainder using running skyline. Partial suspension is possible in required area. During a quality control check it was decided to delete the north area due to low volume. Fair economics.</p> | | | |
| Watershed/Fisheries | Field Review: G. Jackson, 7/01/93 | Office Review: J. Knutzen | |
| <p>Streams on map generally did not match habitat. Listed Class II streams are mostly Class III, and just barely at that. One listed Class I was not even worth flagging. Two streams north end original unit were mistakenly flagged B/W;. these should be treated as water quality streams requiring split yarding away from the stream banks. Dolly varden found in bottom half of stream draining to northeast third of unit. This stream requires a 100' buffer and log to slope break above Class III region.</p> | | | |
| Soils/Geology | Field Review: G. Jackson, 7/01/93 | Office Review: T. Stewart | |
| <p>Gentle slopes, stable soils. One small area of McGilvery soil on southern part of unit; partial suspension is required in this area. Achieve maximum possible suspension.</p> | | | |
| Wildlife | Field Review: C. Confer, 7/01/93 | Office Review: M. Hall | |
| <p>Retain Level I structure. Goshawk survey conducted - no detections. Murrelet dawn survey conducted - presence observed. Small pond approximately 1/4 mile northwest of north tip of unit. Woodpecker feeding cavity(ies) identified.</p> | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| <p>Unit not seen from any priority travel route or use area.</p> | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| <p>Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit.</p> | | | |
| Interdisciplinary Team Recommendations | | | |
| <p>Type A clearcut. Buffer stream #4 100' each side in Class II segment to break at start of Class III segment. Original units 593-416 and 593-407 merged to make one unit. Mitigation measures for this unit are as follows: F3, F5, F6, F8, F10, and W5.</p> | | | |

QUAD : C4-NW



.5 MILE

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

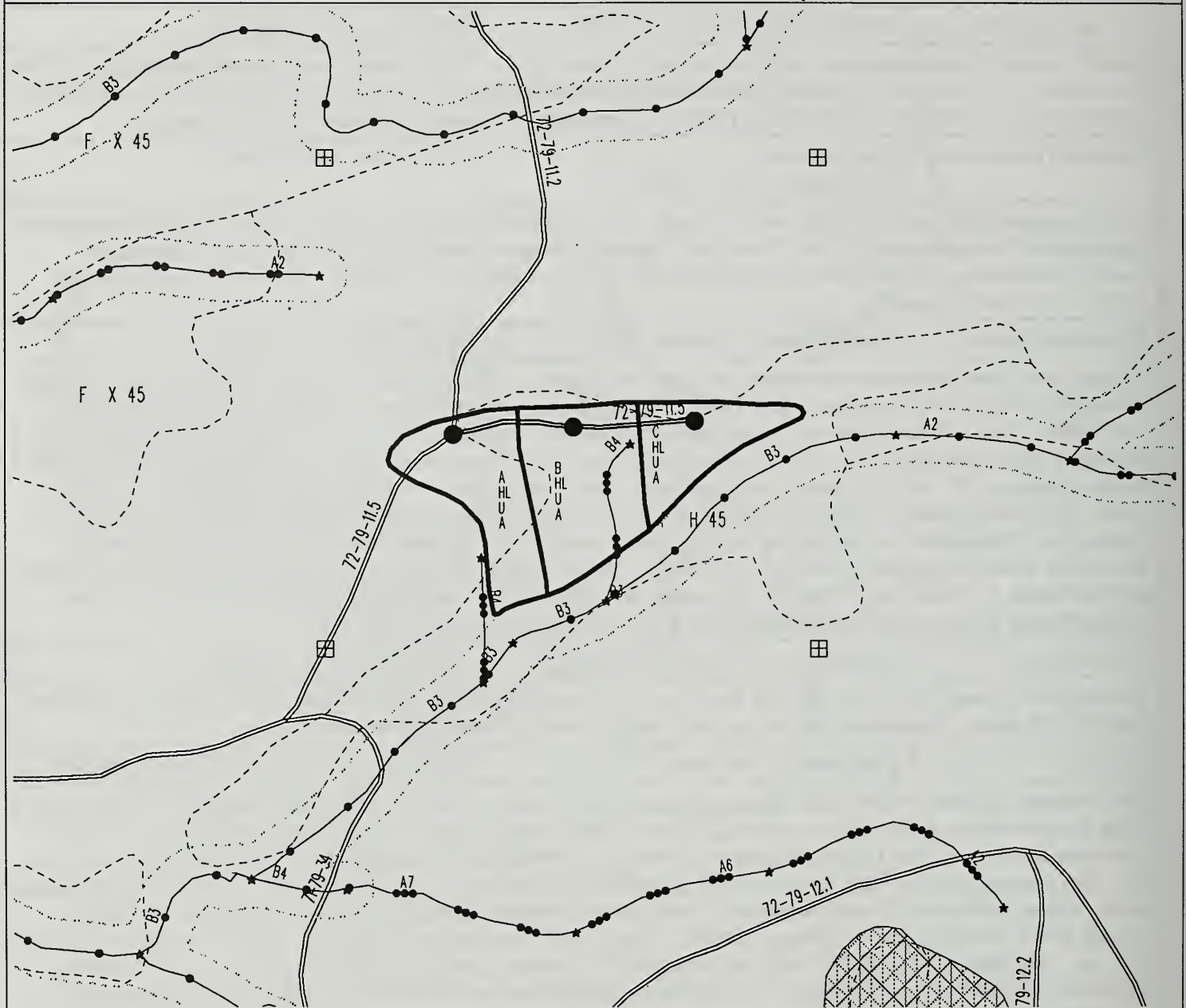
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|--|--|---|-----------------------|
| VCU #: 593 | UNIT #: 408 | QUARTER QUAD: C4NW | PHOTO YR/#: 5-1990/76 |
| ACRES: 54.3 | VOL.: 2181.5 MBF | LOGGING SYSTEM: Swingyarder/Running Skyline, Shovel | |
| LANDSCAPE ZONE: Unit is in Eleven Mile Creek Late Successional Corridor and partially in Eleven Mile Block. | | | |
| Timber/Vegetation | Field Review: J. Miller, 7/29/93 | Office Review: J. Goering | |
| Species composition predominantly hemlock but includes some spruce. Regeneration predominantly hemlock but includes some spruce. Light windthrow damage evident in small patches throughout the unit. Low to moderate amounts of root disease evident in hemlock in south-central portion. Light amount of mistletoe infection evident in canopy. | | | |
| Logging/Transportation | Field Review: K. Martin/B. Flatz, 7/29/93 | Office Review: E. Urstadt | |
| Unit is accessed by Road #71-79-34F and two spurs. The north portion should be shovel logged. The SE is suitable for a swingyarder using running skyline. Partial cut is feasible. Suggest leaving nonmerch timber along boundary to minimize blowdown. Tailholds may be needed in TTRA buffer. This unit has various stream buffers and one eagle buffer. Very good economics. | | | |
| Watershed/Fisheries | Field Review: E. Ablow, 7/03/93 | Office Review: T. Stewart | |
| Stream 1 is a Class I stream that surrounds the southwest boundary. The northern 3/4 of the stream along the boundary is channel typed C1 which requires a 200' buffer. The Southern 1/4 of the stream is channel typed C5 and requires a 100' buffer. Stream 2 surrounds the southern half of the eastern boundary. It is a Class I stream channel type B5 and requires a 100' buffer plus a 50' selective cut buffer. Stream 3 is a Class II, A2 stream channel that flows into Stream 2. It also requires a 100' buffer. Coho fry are abundant. Class I streams have excellent habitat, large pools, and good cover (LWD and boulders). The side slopes of all Class I streams are steep (75% and above) and show some signs of small slides. Recommend not cutting below slope breaks on all Class I streams even if it requires extending buffers beyond the required minimum. Stream 4 is a Class III, A4-A2 stream that flows into the center of the southern boundary joining Stream 1. Stream 5 is a Class III, A4 stream that flows into the center of the eastern boundary. They both require harvest to slope break, split yarding, and directional falling away from stream. | | | |
| Soils/Geology | Field Review: E. Ablow, 7/03/93 | Office Review: T. Stewart | |
| Side slopes of streams are steep (75% and above) and show signs of sliding. The unit above 450' elevation is stable and roughly 30% slope. Recommend not cutting below 450' elevation on southern boundary. | | | |
| Wildlife | Field Review: H. Sloan, 7/02/93 | Office Review: M. Hall/C. Confer, 8/17/93 | |
| Bear and deer sign/use evident. Bald eagle's nest located near center of unit. Western unit boundary was extended out a short distance to get a high quality winter range spruce. This occurred right by a Class III stream which was missed during resource visit. John Goering expressed concern over yarding this spruce through this newly discovered stream. The situation was noted by John during a revisit to flag the two eagle nests in and near the unit on 8/19/93. Split yarding on the stream is required. Partial suspension or split yarding would be desirable for this stream due to affluence to a Class I stream (sediment loading, erosion potential) flagged G/W from muskeg within unit in north to northeast section to nest tree. Nest tree - flagged B/W (large, approximately 6' diameter spruce), 330' buffer required. Level 1 structure retention. Goshawk survey performed - no detections. Murrelet survey conducted - occupancy behavior observed. Second nest located west of unit approximately 500'. Timing restrictions on blasting will exist if road is within 1/2 mile of either nest. Contiguous area with many dead trees. Plucking post was found in southern portion of unit. Remains identified as hermit thrush - probable sharp-shinned hawk use. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit not seen from any priority travel route or use area. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Class I streams are excluded from unit. Splityard Class III stream in west of unit. Eagle nest located and flagged - buffer excluded from unit. Type G - shelterwood. Constraints to maintain structure and promote long term conversion back to winter range. Mitigation measures for this unit are as follows: F5, F6, F8, W2, W8, and W12. | | | |

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

VCU : 593

UNIT : 409

QUAD : C4-NW



- Revised Control Lake Project Boundary
- Post-Field Unit Boundary w/ Setting Codes
- Other Post-Field Unit Boundaries
- USFS Timber Types for Volc 4-7
- Eagle Tree Buffer of 330ft
- Existing & Rebuilt Roads
- F.S. Roads Under Construction
- Post-Field Proposed Roads
- Ahmu-Class 1 & Stream Chatypes
- Ahmu-Class 2 & Stream Chatypes
- Ahmu-Class 3 & Stream Chatypes
- Channel Type Change

- Lakes and Ponds
- Second Growth Units
- MMI 4
- McGilvery > 41
- Landings
- Stream & Lake NoCUT Buffers



.5 MILE

May 16, 1994

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

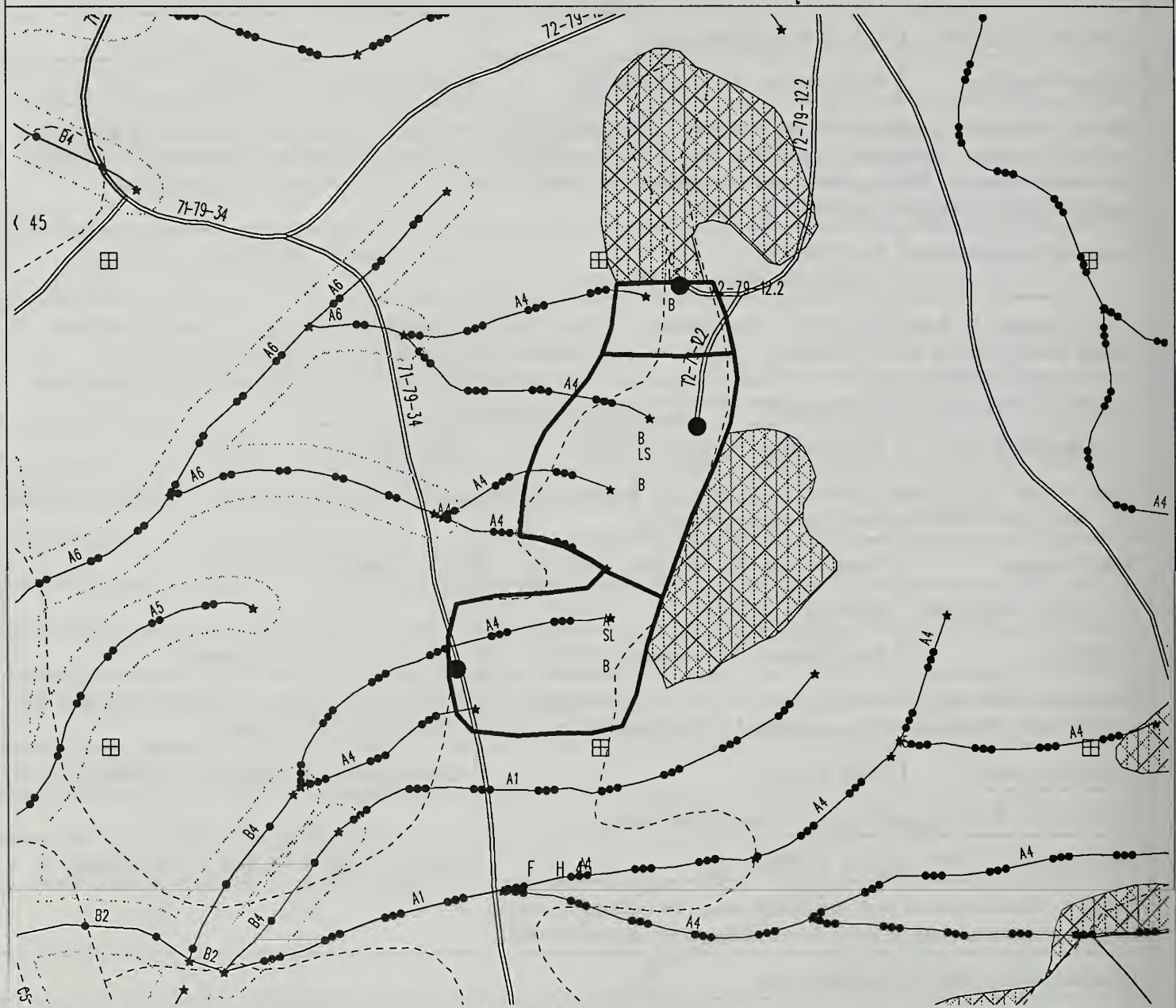
| | | | |
|---|--|---|--------------------------|
| VCU #: 593 | UNIT #: 409 | QUARTER QUAD: C4NW | PHOTO YR/#: 1991/1990/77 |
| ACRES: 16.9 | VOL.: 347.5 MBF | LOGGING SYSTEM: Highlead with 70' Tower South of Road, Shovel | |
| LANDSCAPE ZONE: Unit is in Western Peninsula. | | | |
| Timber/Vegetation | Field Review: G. Hedin, 7/27/93 | Office Review: J. Goering | |
| Species composition predominantly hemlock but includes some spruce and cedar. Light amount of mistletoe infection evident in canopy. Moderately low volume with < 50% canopy closure & relatively low site productivity in northeast and southwest areas. Muskeg incursions incorporated with mixed species, low volume timber. Regeneration predominantly hemlock but includes a few spruce. | | | |
| Logging/Transportation | Field Review: J. Spolar/B. Wilkinson, 8/06/93 | Office Review: M. Whitty | |
| Unit is accessed by Road #72-79-11.5. Recommend a 70 foot tower using highlead to harvest this unit. A 100 foot stream buffer is along the SE boundary. Tail trees are fair and may need tie-backs. Partial cut is not feasible. Blowdown in the buffer may be a problem. The east and SW tips were deleted due to TTRA buffer requirements and related lack of volume. Fair economics. | | | |
| Watershed/Fisheries | Field Review: B. Romey, 7/20/93 | Office Review: T. Stewart | |
| Class I - 100' TTRA buffer, B/W on south of unit. Streams 2 and 3 are Class III - O/W, split yard. Stream 4 is a Class IIa - B/W, 100' TTRA buffer (excluded from unit). | | | |
| Soils/Geology | Field Review: M. Minnillo, 7/20/93 | Office Review: T. Stewart | |
| Low slopes, small trees. No stability concerns. | | | |
| Wildlife | Field Review: M. Minnillo, 7/20/93 | Office Review: R. Fairbanks | |
| Recommend bald eagle nest survey prior to harvest. Recommend a 150' select harvest buffer along large muskeg to the north of unit. Structure will be maintained in the Class I stream buffer. Retain Level 1 structure. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit not seen from any priority travel route or use area. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Unit reduced in size from original because stream buffers reduced available timber. 100' buffer on Class I stream at south boundary. Recommend bald eagle survey prior to final layout. Type A clearcut. Mitigation measures for this unit are as follows: F5, F6, F8, F10, and W5. | | | |













CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD







VCU : 593

UNIT : 410

QUAD : C4-NW



-  Revised Control Lake Project Boundary
-  Post-Field Unit Boundary w/ Setting Codes
-  Other Post-Field Unit Boundaries
-  USFS Timber Types for Volc 4-7
-  Eagle Tree Buffer of 330ft
-  Existing & Rebuilt Roads
-  F.S. Roads Under Construction
-  Post-Field Proposed Roads
-  Ahmu-Class 1 & Stream Chantypes
-  Ahmu-Class 2 & Stream Chantypes
-  Ahmu-Class 3 & Stream Chantypes
-  Channel Type Change

-  Lakes and Ponds
 Second Growth Units
 MMI 4
 McGilvery > 41
 Landings
 Stream & Lake NoCUT Buffers

.5 MILE

May 16, 1994

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

| | | | |
|---|--|--|--------------------------|
| VCU #: 593 | UNIT #: 410 | QUARTER QUAD: C4NW | PHOTO YR/#: 1991/1990-76 |
| ACRES: 27.1 | VOL.: 881.7 MBF | LOGGING SYSTEM: Slackline with 70' Tower/Shotgun System/ Live Skyline | |
| LANDSCAPE ZONE: South half of unit is within Eleven Mile Block. | | | |
| Timber/Vegetation | Field Review: T. Stecher, 7/23/93 | Office Review: J. Goering | |
| Species composition predominantly hemlock but includes cedar and some spruce. Regeneration predominantly hemlock but includes spruce. Slope instability/failure potential existing with relatively shallow soils, and poor soil drainage areas. Evidence of recent mass movement in the north-central portion. Regeneration concerns due to low site index soils. Very shallow soils. Windthrow damage present in northern section of unit. | | | |
| Logging/Transportation | Field Review: J. Spolar/B. Wilkinson, 7/28/93 | Office Review: E. Urstadt | |
| Unit is accessed by Road #72-79-34.3 and 72-79-12.2 with short spur. A 70 foot tower with slack line system is needed for the SW setting. The two NE settings can use a 70 foot tower with shotgun system. Partial suspension will be possible. Guy stumps and tailholds are poor. Will need deadman or other artificial anchors. Partial cut is not practical. Fair economics. | | | |
| Watershed/Fisheries | Field Review: R. Rogers, 7/19/93 | Office Review: T. Stewart | |
| Streams 1 and 2 are Class III - directional fall, split yard. Stream 3 - directional fall, split yard, leave windfirm nonmerchantable timber in V-notch. | | | |
| Soils/Geology | Field Review: R. Rogers, 7/19/93 | Office Review: T. Stewart | |
| Drop northern 1/2 of unit due to thin, unstable soils. Attempt full suspension on southern 1/2 of unit; attain partial suspension at minimum. | | | |
| Wildlife | Field Review: H. Sloan, 7/19/93 | Office Review: M. Hall | |
| No concerns. Level 1 structure retention. Wolf tracks identified in adjacent muskegs and within south edge of unit. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit not seen from any priority travel route or use area. Seen from West Coast Waterway in Middleground. Maximum Modification VQO. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Boundary modified due to soil stability concerns. Directionally fall and split yard Class III streams. Retain blind lead area and retain areas that cannot be split yarded. Achieve maximum possible suspension. Type B clearcut. Mitigation measures for this unit are as follows: F1, F3, F6, and W4. | | | |

NO UNIT MAP
UNIT DROPPED OR DEFERRED

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

| | | | |
|---|---------------|--|-------------|
| VCU #: 593 | UNIT #: 411 | QUARTER QUAD: | PHOTO YR/#: |
| ACRES: | VOL.: | LOGGING SYSTEM: Unit dropped/very little of unit left. | |
| LANDSCAPE ZONE: | | | |
| Timber/Vegetation | Field Review: | Office Review: | |
| | | | |
| Logging/Transportation | Field Review: | Office Review: | |
| | | | |
| Watershed/Fisheries | Field Review: | Office Review: | |
| | | | |
| Soils/Geology | Field Review: | Office Review: | |
| | | | |
| Wildlife | Field Review: | Office Review: | |
| | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit not seen from any priority travel route or use area. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | Reviewed By: | |
| Deferred - very small area of CFL. | | | |

NO UNIT MAP
UNIT DROPPED OR DEFERRED

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

| | | | |
|---|------------------------------------|---|------------------------------|
| VCU #: 593 | UNIT #: 412 | QUARTER QUAD: C4SW | PHOTO YR/#: 1991/4-790-13 |
| ACRES: | VOL.: | LOGGING SYSTEM: | |
| LANDSCAPE ZONE: | | | |
| Timber/Vegetation | Field Review: S. Karstens, 7/23/93 | Office Review: J. Goering | |
| <p>Low volume, mixed-species, multi-canopy stand with < 50% canopy closure and low site productivity in southeast half. Muskeg incursions incorporated with mixed species, low volume timber. Species composition predominantly hemlock and cedar with a few lodgepole present. Species composition predominantly hemlock with some cedar in the northwestern half. Few spruce are present. Windthrow damage present in northern portion of unit. Steep, rocky, and shallow soils with some rock bluffs. Regeneration concerns due to shallow rocky soils and the presence of salmonberry and salal. Slope instability/failure and erosive potential existing in the western region. Regeneration mostly on nurse logs and consists of hemlock, some spruce and a few cedar.</p> | | | |
| Logging/Transportation | Field Review: | Office Review: | |
| | | | |
| Watershed/Fisheries | Field Review: | Office Review: | |
| Stream 1 is a Class III - O/W, V-notch, directional fall away from stream. | | | |
| Soils/Geology | Field Review: M. Minnillo, 7/21/93 | Office Review: | |
| Upper half of unit mapped and verified as McGilvery. Slopes are 75% to 110% above 750' elevation. Full suspension required on lower unit boundary below 750' elevation. | | | |
| Wildlife | Field Review: M. Minnillo, 7/21/93 | Office Review: M. Hall | |
| Unit is small and steep. Wildlife sign is above moderate. Deer sign/use evident in area. Surrounding habitat is similar. Retain Level 1 structure. Cranes heard from east, likely at lake. Two cranes observed west of unit in muskeg. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit not seen from any priority travel route or use area. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | Reviewed By: T. Stewart | |
| Unit deferred due to small size after unstable areas are removed. | | | |

NO UNIT MAP

UNIT DROPPED OR DEFERRED

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

| | | | |
|---|---------------|--|-------------|
| VCU #: 593 | UNIT #: 413 | QUARTER QUAD: | PHOTO YR/#: |
| ACRES: | VOL.: | LOGGING SYSTEM: Unit dropped/very little of unit left. | |
| LANDSCAPE ZONE: | | | |
| Timber/Vegetation | Field Review: | Office Review: | |
| | | | |
| Logging/Transportation | Field Review: | Office Review: | |
| | | | |
| Watershed/Fisheries | Field Review: | Office Review: | |
| | | | |
| Soils/Geology | Field Review: | Office Review: | |
| | | | |
| Wildlife | Field Review: | Office Review: | |
| | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit not seen from any priority travel route or use area. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | Reviewed By: | |
| Deferred - very small area of CFL. | | | |

NO UNIT MAP
UNIT DROPPED OR DEFERRED

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

| | | | |
|---|---------------|--|-------------|
| VCU #: 593 | UNIT #: 414 | QUARTER QUAD: | PHOTO YR/#: |
| ACRES: | VOL.: | LOGGING SYSTEM: Unit dropped/very little of unit left. | |
| LANDSCAPE ZONE: | | | |
| Timber/Vegetation | Field Review: | Office Review: | |
| | | | |
| Logging/Transportation | Field Review: | Office Review: | |
| | | | |
| Watershed/Fisheries | Field Review: | Office Review: | |
| | | | |
| Soils/Geology | Field Review: | Office Review: | |
| | | | |
| Wildlife | Field Review: | Office Review: | |
| | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit not seen from any priority travel route or use area. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Deferred - very small area of CFL. | | | |

This unit is combined with unit 593-407.

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

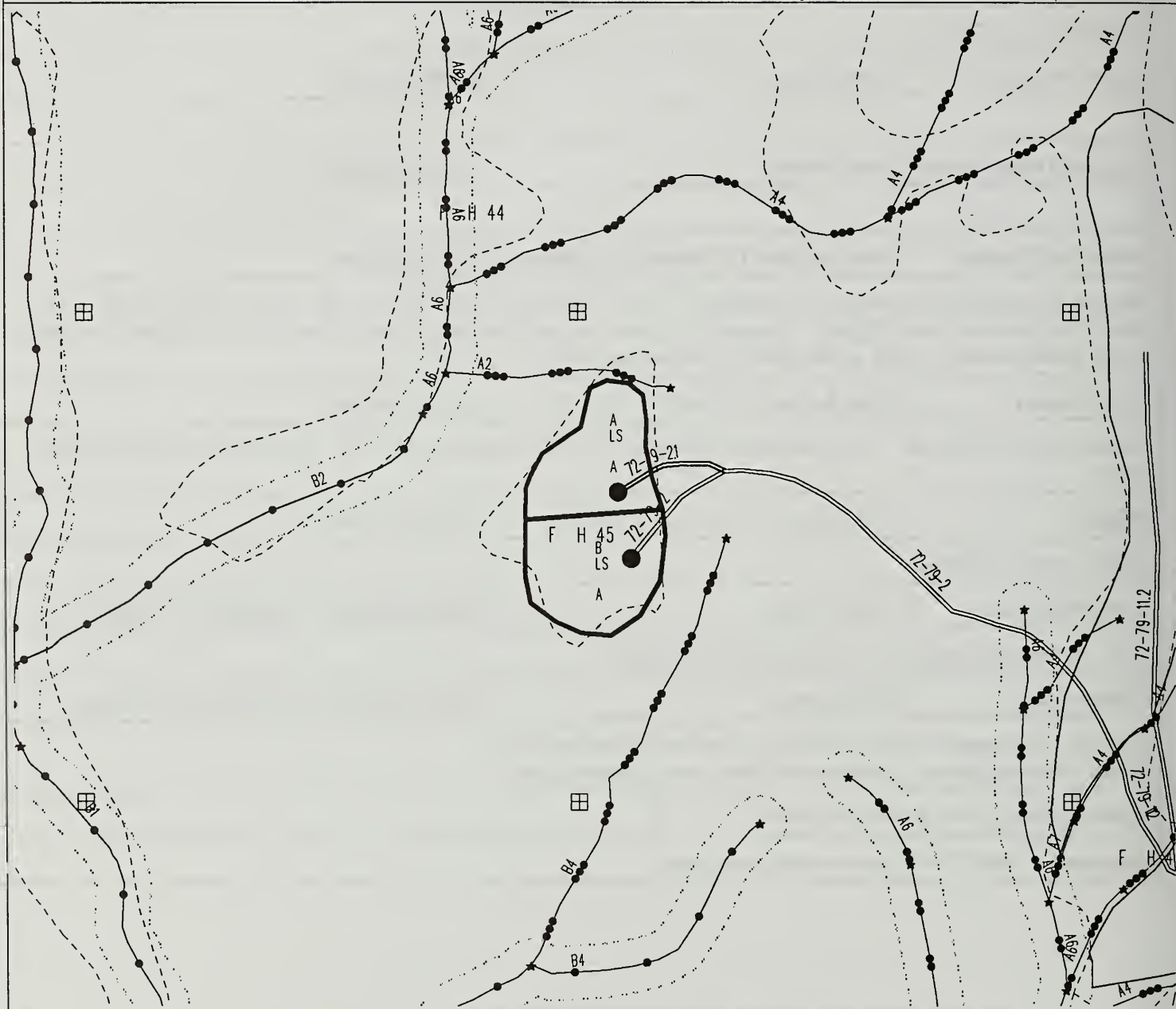
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|---|-----------------------------------|---|-------------|
| VCU #: 593 | UNIT #: 416 | QUARTER QUAD: | PHOTO YR/#: |
| ACRES: | VOL.: | LOGGING SYSTEM: | |
| LANDSCAPE ZONE: | | | |
| Timber/Vegetation | Field Review: | Office Review: | |
| | | | |
| Logging/Transportation | Field Review: | Office Review: | |
| | | | |
| Watershed/Fisheries | Field Review: G. Jackson, 7/01/93 | Office Review: | |
| Streams on map generally did not match habitat. Class II streams were mostly Class III, and just barely at that. One class I was not even worth flagging. Streams 1 & 2 were flagged Blue/White, not that there is a 100' buffer. Treated as water quality streams. Dolly varden found in bottom part of 4. | | | |
| Soils/Geology | Field Review: G. Jackson, 7/01/93 | Office Review: | |
| Gentle slopes, stable soils. One small area of McGilvery soil on southern part of unit. Should full suspension log this area. | | | |
| Wildlife | Field Review: C. Confer 7/01/93 | Office Review: | |
| Retain Level I structure. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit not seen from any priority travel route or use area. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Unit merged with 593-407 prior to field verification. | | | |

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

VCU : 593

UNIT : 417

QUAD : C4-NW



- | | | | |
|--|---|--|-----------------------------|
| | Revised Control Lake Project Boundary | | Lakes and Ponds |
| | Post-Field Unit Boundary w/ Setting Codes | | Second Growth Units |
| | Other Post-Field Unit Boundaries | | MMI 4 |
| | USFS Timber Types for Volc 4-7 | | McGilvery > 41 |
| | Eagle Tree Buffer of 330ft | | Landings |
| | Existing & Rebuilt Roads | | Stream & Lake NoCUT Buffers |
| | F.S. Roads Under Construction | | |
| | Post-Field Proposed Roads | | |
| | Ahmu-Class 1 & Stream Chantypes | | |
| | Ahmu-Class 2 & Stream Chantypes | | |
| | Ahmu-Class 3 & Stream Chantypes | | |
| | Channel Type Change | | |

Moy 16, 1994

.5 MILE

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

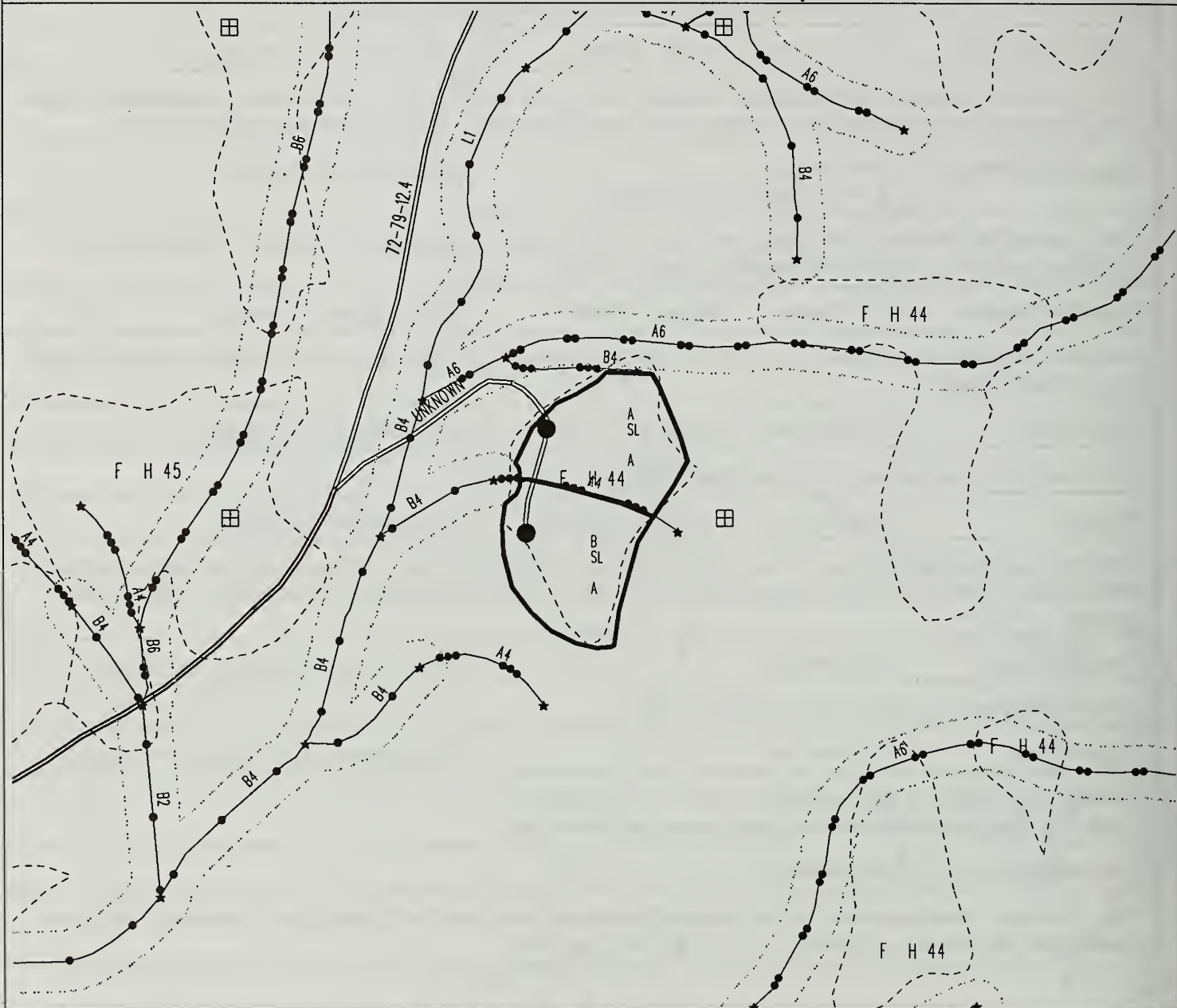
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|---|--|---|--------------------------|
| VCU #: 593 | UNIT #: 417 | QUARTER QUAD: C4NW | PHOTO YR/#: 1991/1990-78 |
| ACRES: 10.2 | VOL.: 172.8 MBF | LOGGING SYSTEM: Live Skyline/Shotgun with 70' tower | |
| LANDSCAPE ZONE: Unit located in Eleven Mile Creek Late Successional Corridor. | | | |
| Timber/Vegetation | Field Review: G. Hedin, 8/10/93 | Office Review: J. Goering | |
| Species composition predominantly hemlock and cedar with a few spruce present. Regeneration predominantly hemlock with a few spruce but is lacking cedar. Steep, rocky, and shallow soils. Alaska yellow-cedar decline evident. | | | |
| Logging/Transportation | Field Review: B. Wilkinson/J. Graves, 8/13/93 | Office Review: M Whitty | |
| Unit is accessed by Road #72-79-2 and a short spur. A 70 foot tower using a shotgun system can achieve partial suspension (required). Partial cut is feasible. Good economics. | | | |
| Watershed/Fisheries | Field Review: B. Rogers, 8/03/93 | Office Review: J. Knutzen | |
| Streams to the north and southeast are Class III. Stream to the north is G/W and stream to southeast is O/W (No G/W hung on north stream). | | | |
| Soils/Geology | Field Review: M. Minnillo, 8/03/93 | Office Review: J. Knutzen | |
| Partial suspension required due to wet, moderate slopes with large timber. | | | |
| Wildlife | Field Review: M. Minnillo, 8/03/93 | Office Review: M. Hall | |
| High deer and some bear sign/use evident. Two goshawks observed flying above and in stand - high amount of large downed trees in unit. Recommend goshawk/nest survey prior to harvest; may need to avoid habitat. Retain Level 1 structure. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit not seen from any priority travel route or use area. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Type A clearcut. Conduct goshawk survey prior to layout/harvest to determine if nesting/use is occurring. Mitigation measures for this unit are as follows: F6, F10, W5, W9, and W10. | | | |

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

VCU : 593

UNIT : 418

QUAD : C4-NW



- Revised Control Lake Project Boundary
- Post-Field Unit Boundary w/ Setting Codes
- Other Post-Field Unit Boundaries
- USFS Timber Types for Volc 4-7
- Eagle Tree Buffer of 330ft
- Existing & Rebuilt Roads
- F.S. Roads Under Construction
- Post-Field Proposed Roads
- Ahmu-Class 1 & Stream Chantypes
- Ahmu-Class 2 & Stream Chantypes
- Ahmu-Class 3 & Stream Chantypes
- Channel Type Change

- Lakes and Ponds
- Second Growth Units
- MMI 4
- McGilvery > 41
- Landings
- Stream & Lake NoCUT Buffers

May 16, 1994

.5 MILE

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

| | | | |
|---|--|--|--------------------------|
| VCU #: 593 | UNIT #: 418 | QUARTER QUAD: C4NW | PHOTO YR/#: 1991/1990-78 |
| ACRES: 12.7 | VOL.: 391.8 MBF | LOGGING SYSTEM: Slackline with 70' Tower | |
| LANDSCAPE ZONE: Unit is in Western Peninsula. | | | |
| Timber/Vegetation | Field Review: S. Karstens, 7/20/93 | Office Review: J. Goering | |
| Species composition includes hemlock, spruce, and cedar. Regeneration predominantly hemlock but includes a few cedar and spruce. Low to moderate amounts of mistletoe infection evident in canopy. Alaska yellow cedar decline evident. | | | |
| Logging/Transportation | Field Review: B. Wilkinson/J. Graves, 8/10/93 | Office Review: K. Jehnke | |
| Unit is accessed by Road #72-79-1.1. Recommend a 70 foot tower using slackline system. Partial suspension can be achieved on 60% of the unit. One landing will need a mobile anchor. Partial cut is not practical. Engineers did not find unstable soils; verify during final layout. Good economics. | | | |
| Watershed/Fisheries | Field Review: B. Rogers, 8/03/93 | Office Review: J. Knutzen | |
| Stream south, mid unit and north tip are Class III - G/W (none hung), fall away from stream. Stream north of unit is a Class IIb - O/W, split yard, directional fall away. | | | |
| Soils/Geology | Field Review: M. Minnillo, 8/03/93 | Office Review: T. Stewart | |
| Steep, unstable slopes eliminated from unit. Achieve maximum possible suspension on unit. | | | |
| Wildlife | Field Review: M. Minnillo, 8/03/93 | Office Review: M. Hall | |
| Moderate use deer/bear habitat. Retain Level 1 structure. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit not seen from any priority travel route or use area. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Type A clearcut. Unstable soils eliminated from unit and maximum possible suspension achieved on remaining area. Mitigation measures for this unit are as follows: F1, F3, F5, F6, F8, F10, and W5. | | | |













CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD







VCU : 593

UNIT : 419

QUAD : C4-SW



-  Revised Control Lake Project Boundary
-  Post-Field Unit Boundary w/ Setting Codes
-  Other Post-Field Unit Boundaries
-  USFS Timber Types for Volc 4-7
-  Eagle Tree Buffer of 330ft
-  Existing & Rebuilt Roads
-  F.S. Roads Under Construction
-  Post-Field Proposed Roads
-  Ahmu-Class 1 & Stream Chantypes
-  Ahmu-Class 2 & Stream Chantypes
-  Ahmu-Class 3 & Stream Chantypes
-  Channel Type Change

-  Lakes and Ponds
 Second Growth Units
 MMI 4
 McGilvery > 41
 Landings
 Stream & Lake NoCUT Buffers

.5 MILE

May 16, 1994

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

| | | | |
|--|---|---|--------------------------|
| VCU #: 593 | UNIT #: 419 | QUARTER QUAD: C4SW | PHOTO YR/#: 1991/1990-75 |
| ACRES: 39.3 | VOL.: 1281.0 MBF | LOGGING SYSTEM: Swingyarder/Running Skyline, Shovel | |
| LANDSCAPE ZONE: Located in Eleven-Mile Block. | | | |
| Timber/Vegetation | Field Review: J. Miller, 7/21/93 | Office Review: J. Goering | |
| Species composition predominantly hemlock but includes some spruce. Regeneration predominantly hemlock but includes a few spruce. Heavy amount of mistletoe infection evident in canopy. Some thin soil, poor soil drainage areas in the eastern portion with windfall. Exclude the eastern edge near the slope break due to soil stability concerns. | | | |
| Logging/Transportation | Field Review: E. DeWilde/D. Keister, 7/22/93 | Office Review: M. Whitty | |
| Unit is accessed by Road #71-79-34.2 and five short spurs. The western half should be shovel logged and the east half should use a swing yarder with running skyline. Partial suspension will be possible. Partial cut is possible. The east boundary has a 240 foot stream buffer. This looks excessive and should be verified during final layout. Spurs on west are not flagged in field. | | | |
| Watershed/Fisheries | Field Review: B. Romey, 7/17/93 | Office Review: G. McNaughton | |
| Stream 1 needs to be buffered 200' from bottom of slope break to eliminate unstable side slopes from unit. Stream 2 need 100' buffer (TTRA). Split yard, directional fall away from Stream 3. | | | |
| Soils/Geology | Field Review: B. Romey, 7/17/93 | Office Review: G. McNaughton | |
| Slumps, slides, and seeps on side slopes along east boundary of unit. Buffer 200' up from bottom of slope break. | | | |
| Wildlife | Field Review: B. Romey, 7/17/93 | Office Review: M. Hall | |
| Heavily used muskeg on west side of unit by bear and deer - leave buffer for wildlife corridor. Woodpecker observed and audible in unit. Red-tailed hawk nesting site observed by TC. Eagle observed flying over unit. Retain Level 1 structure. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit not seen from any priority travel route or use area. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Maintain boundary at slope break due to stability concerns. Boundary flagged beyond here in field. Modified boundary by dropping portion above stream located on northwest boundary. Splityard Class III stream in east-central part of unit. Type A clearcut due to heavy mistletoe. Mitigation measures for this unit are as follows: F1, F5, F8, and W5. | | | |

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

VCU : 593

UNIT : 420

QUAD : C4-SW



- Revised Control Lake Project Boundary
- Post-Field Unit Boundary w/ Setting Codes
- Other Post-Field Unit Boundaries
- USFS Timber Types for Volc 4-7
- Eagle Tree Buffer of 330ft
- Existing & Rebuilt Roads
- F.S. Roads Under Construction
- Post-Field Proposed Roads
- Ahmu-Class 1 & Stream Chantypes
- Ahmu-Class 2 & Stream Chantypes
- Ahmu-Class 3 & Stream Chantypes
- ★ Channel Type Change

- Lakes and Ponds
- Second Growth Units
- MMI 4
- McGilvery > 41
- Landings
- Stream & Lake NoCUT Buffers

.5 MILE

May 16, 1994

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

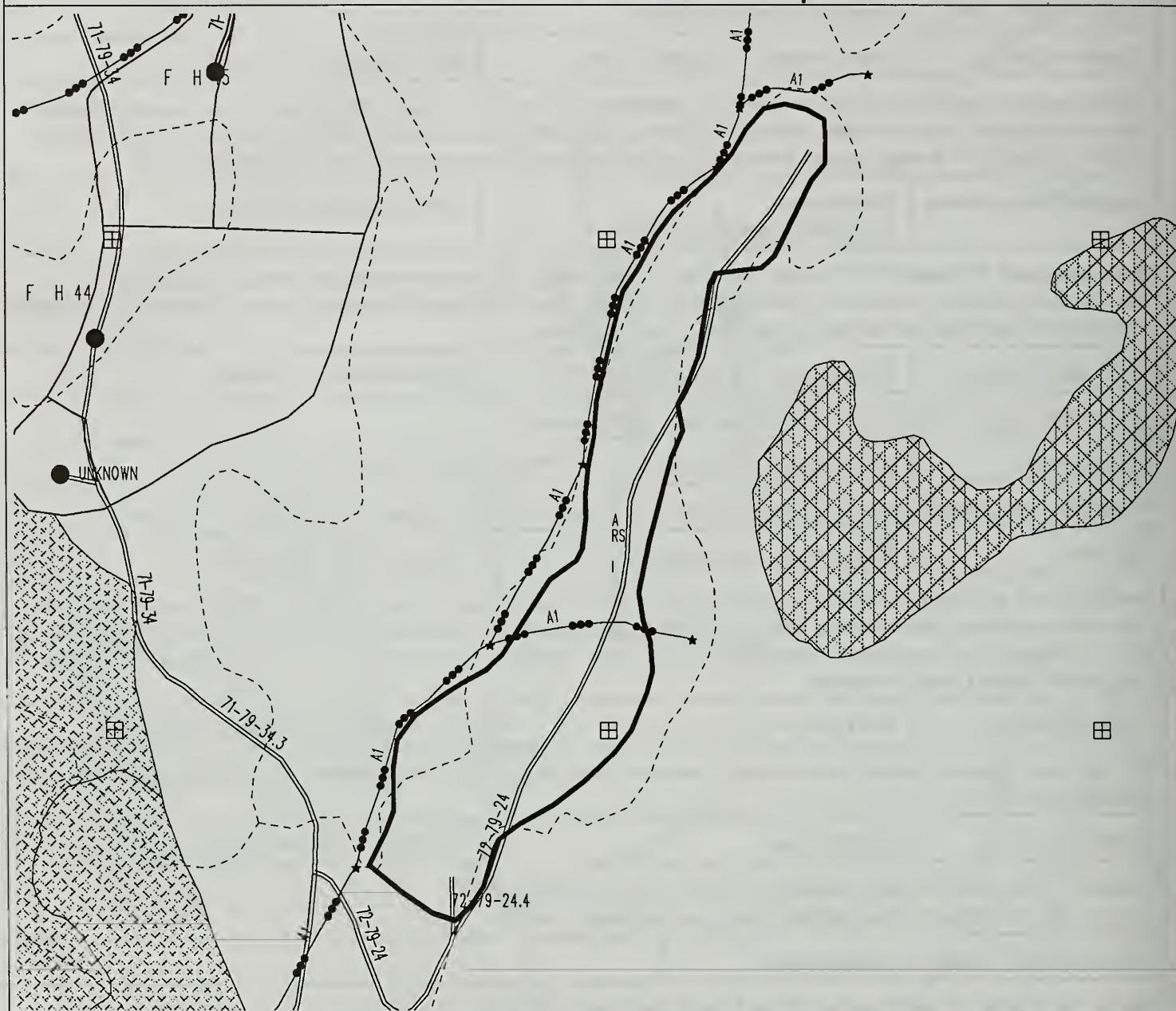
| | | | |
|--|---|---|--------------------------|
| VCU #: 593 | UNIT #: 420 | QUARTER QUAD: C4NW | PHOTO YR/#: 1991/1990-75 |
| ACRES: 60.9 | VOL.: 1324.6 MBF | LOGGING SYSTEM: Slackline with 70' Tower/Shotgun System | |
| LANDSCAPE ZONE: Located in Eleven-Mile Block. | | | |
| Timber/Vegetation | Field Review: G. Hedin, 7/21/93 | Office Review: J. Goering | |
| Species composition predominantly hemlock but includes cedar and some spruce. Regeneration predominantly hemlock but includes spruce and few cedar. Muskeg incursions incorporated with mixed species, low volume timber in eastern portion. Windthrow damage present with some thin soil, poor soil drainage areas in western portion of unit. | | | |
| Logging/Transportation | Field Review: K. Martin/J. Spolar, 7/23/93 | Office Review: K. Jehnke | |
| Unit is accessed by Road #71-79-34 and 71-79-30. Recommend a 70 foot tower with slackline system. Partial suspension is possible. Partial cut is not feasible on steeper slopes and downhill settings. Some guy stumps and tailholds are poor and need artificial anchors or tie backs. Fair economics. | | | |
| Watershed/Fisheries | Field Review: M. Minnillo, 7/17/93 | Office Review: A. Wolfson | |
| No streams in unit. Fall away from stream on north unit boundary. | | | |
| Soils/Geology | Field Review: M. Minnillo, 7/17/93 | Office Review: A. Wolfson | |
| McGilvery soils mapped but not observed in field. Partial suspension where possible due to steep, wet slopes. | | | |
| Wildlife | Field Review: M. Minnillo, 7/17/93 | Office Review: R. Fairbanks | |
| Retain eastern unit boundary just to top of hill in order to maintain intensively used deer/bear habitat area to east of unit. Maintain snags along unit boundary and large sound snags within unit where feasible. Recommend bald eagle nest survey prior to harvest in unit and along Class I stream to the west. Goshawk survey conducted - no detections. Contiguous old-growth; retain Level 1 structure. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit not seen from any priority travel route or use area. Seen from West Coast Waterway in Middleground. Maximum Modification VQO. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Partial cut in areas of uphill yarding (Type I single tree/group selection). Type A clearcut in remainder of unit. Use slackline system to achieve partial suspension. Splityard deep V-notch in north center of unit. Mitigation measures for this unit are as follows: F6, F8, W2 below road, and W5 above road. | | | |

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

VCU : 593

UNIT : 421

QUAD : C4-SW



- Revised Control Lake Project Boundary
- Post-Field Unit Boundary w/ Setting Codes
- Other Post-Field Unit Boundaries
- USFS Timber Types for Volc 4-7
- Eagle Tree Buffer of 330ft
- Existing & Rebuilt Roads
- F.S. Roads Under Construction
- Post-Field Proposed Roads
- Ahmu-Class 1 & Stream Chantypes
- Ahmu-Class 2 & Stream Chantypes
- Ahmu-Class 3 & Stream Chantypes
- Channel Type Change

- Lakes and Ponds
- Second Growth Units
- MMI 4
- McGilvery > 41
- Landings
- Stream & Lake NoCUT Buffers

August 03, 1994

.5 MILE

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

| | | | |
|--|--|---|--------------------------|
| VCU #: 593 | UNIT #: 421 | QUARTER QUAD: C4NW | PHOTO YR/#: 1991/1990-75 |
| ACRES: 35.2 | VOL.: 988.4 MBF | LOGGING SYSTEM: Swingyarder/Running Skyline | |
| LANDSCAPE ZONE: Unit is within proposed Eleven-Mile Block. | | | |
| Timber/Vegetation | Field Review: S. Karstens, 7/21/93 | Office Review: J. Goering | |
| Species composition predominantly hemlock but includes cedar and some spruce. Regeneration predominantly hemlock with a few spruce but is lacking cedar. Muskeg incursions incorporated with mixed species, low volume timber and cedar regeneration in northern portion. Windthrow damage present in eastern portion of unit. Steep, rocky, and shallow soils with rock bluffs along the eastern portion of the unit. | | | |
| Logging/Transportation | Field Review: B. Wilkinson/J. Spolar, 8/05/93 | Office Review: K. Jehnke | |
| Unit is accessed by Road #72-79-24. Recommend swing yarding with running skyline. Seventy percent is uphill yarding. Partial suspension will not be achieved and is not required. Partial cut will be difficult due to lack of "lift". Tailholds will need tie-backs. Group selection cut is a good alternative. Guy stumps are poor; deadman or tie-backs will be needed. Fair economics. | | | |
| Watershed/Fisheries | Field Review: B. Romey, 7/17/93 | Office Review: T. Stewart | |
| Stream 1 is Class III - O/W, fall away from stream. | | | |
| Soils/Geology | Field Review: M. Minnillo, 7/17/93 | Office Review: T. Stewart | |
| Slopes are damp, but stable. Instability does not seem to be a problem. | | | |
| Wildlife | Field Review: M. Minnillo, 7/17/93 | Office Review: M. Hall | |
| Bear and deer sign/use evident. Snags will be left along stream on west side of unit. Bald eagles observed circling unit. Recommend bald eagle survey be completed prior to harvest. Both unit and stream to the west need to be surveyed. Goshawk survey conducted - no detections. Sandhill crane heard west of unit. Contiguous old-growth. Retain Level 1 structure. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit not seen from any priority travel route or use area. Seen from West Coast Waterway in Middleground. Maximum Modification VQO. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Type I group selection. Recommend survey for eagle nesting prior to layout/harvest. Splityard and directional fall trees away from Class III streams in center and bottom of unit. Mitigation measures for this unit are as follows: F6, F8, W2, and W11. | | | |

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

VCU : 593

UNIT : 422

QUAD : C4-SW



- Revised Control Lake Project Boundary
- Post-Field Unit Boundary w/ Setting Codes
- Other Post-Field Unit Boundaries
- USFS Timber Types for Volc 4-7
- Eagle Tree Buffer of 330ft
- Existing & Rebuilt Roads
- F.S. Roads Under Construction
- Post-Field Proposed Roads
- Ahmu-Class 1 & Stream Chantypes
- Ahmu-Class 2 & Stream Chantypes
- Ahmu-Class 3 & Stream Chantypes
- Channel Type Change

- Lakes and Ponds
- Second Growth Units
- MMI 4
- McGilvery > 41
- Landings
- Stream & Lake NoCUT Buffers

May 16, 1994

0.5 MILE

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

| | | | |
|--|---|--|--------------------------|
| VCU #: 593 | UNIT #: 422 | QUARTER QUAD: C4SW | PHOTO YR/#: 1991/1990-74 |
| ACRES: 63.4 | VOL.: 1572.8 MBF | LOGGING SYSTEM: Swingyarder/Running Skyline (25%), Shovel | |
| LANDSCAPE ZONE: Unit is within proposed Eleven-Mile Block. | | | |
| Timber/Vegetation | Field Review: J. Miller/J. Goering, 7/20/93 | Office Review: J. Goering | |
| Species composition predominantly hemlock with some spruce. Few cedar are present. Regeneration mostly on nurse logs and consists of hemlock and a few spruce. Slope instability/failure potential existing near the Class I stream. Some hemlock fluting evident. Heavy amount of mistletoe infection evident in canopy of west north-central portion. Split yard the Class III stream in the northern portion of the unit. | | | |
| Logging/Transportation | Field Review: E. DeWilde/D. Keister, 7/21/93 | Office Review: J. Doyal | |
| Unit is accessed by Road #72-79-34.2. Recommend using both shovel and swing yarding. Partial cut is possible. Partial suspension can be achieved. A 200-500 foot buffer is on the east boundary. Verify east boundary buffer and soils during final layout. Good economics. | | | |
| Watershed/Fisheries | Field Review: E. Ablow, 7/07/93 | Office Review: T. Stewart | |
| Eastern side bounded by a Class I (C5 and C3) stream that has side channels and steep unstable side slopes. The stream requires a 200' buffer where channel is typed a C3 and 100' buffer where the channel is C5. Added 300' more feet to protect unstable slopes. The side slopes have both new and old debris flow slides going directly into the Class I stream. There are also many seeps and unstable side slopes. Stream 2 is a Class II, A1 stream that flows west to east into the Class I stream for 250' and then changes to a Class III, A6 stream. 15' bedrock falls are located at the channel type change. The A1 stream channel requires a 100' buffer. The A6 channel should be harvested to slope break and split yarded away from channel. Stream 3, an A1 channel that changes to an A6 channel, is the northernmost tributary that flows west to east in the unit. It is a Class III stream that requires harvest to slope break and split yarding. | | | |
| Soils/Geology | Field Review: E. Ablow, 7/07/93 | Office Review: T. Stewart | |
| The eastern side of the unit has both old and new debris avalanches, slumps and seeps. The slope is made up of a loose saturated till. Requires moving the unit boundary west above the unstable slope approximately 500'. The Northeastern corner of the unit was pulled southwest away from unstable slopes and an old debris avalanche. | | | |
| Wildlife | Field Review: H. Sloan, 7/07/93 | Office Review: M. Hall | |
| Bear and deer sign/use evident. Level 1 structure retention. Goshawk survey conducted - no detections. 7/08/93 dawn murrelet survey conducted - presence behavior detected. Bald eagle observed and heard over unit (fly-over). Recommend eagle nest survey prior to layout. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit not seen from any priority travel route or use area. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Type E overstory removal. Retain < 15" DBH trees to maintain structure and release understory. Remove all mistletoe infected trees. Mitigation measures for this unit are as follows: F1, F5, F6, F8, and W2. Unit boundary modified after field layout to exclude unstable MM14 slopes newly mapped on the east side adjacent to Class I buffer and south end of unit. Recommend eagle nest survey prior to final layout. | | | |

NO UNIT MAP
UNIT DROPPED OR DEFERRED

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

| | | | |
|--|---|--------------------|--|
| VCU #: 593 | UNIT #: 423 | QUARTER QUAD: C4NW | PHOTO YR/#: 1991/1990-73 |
| ACRES: | VOL.: | LOGGING SYSTEM: | |
| LANDSCAPE ZONE: | | | |
| Timber/Vegetation | Field Review: T. Stecher, 7/24/93 | | Office Review: |
| | | | |
| Logging/Transportation | Field Review: E. DeWilde/D. Keister, 7/24/93 | | Office Review: K. Martin |
| <p>Engineers visited the unit and found that the dominant species is lodgepole pine. A small patch of low volume timber was found (<5 acres). One hundred and 150 foot stream buffers removed more timber. A half mile of road is needed to access this unit. Uneconomical.</p> | | | |
| Watershed/Fisheries | Field Review: G. Jackson/E. Ablow, 7/07/93 | | Office Review: |
| <p>One stream (B4 type) need 150' buffer on each side; runs east to west across southern 1/3 of unit. It has a bedrock fish barrier 4' high near outlet to beaver dammed stream. A second Class I stream (B3-L3) flows east to west, bisecting the unit. It also requires a 150' buffer on both sides of the stream channel. Coho fry were found throughout the stream. A third, Class I stream (B4) flows east to west on the northern side of the unit. This requires a 100' buffer.</p> | | | |
| Soils/Geology | Field Review: G. Jackson, 7/07/93 | | Office Review: |
| Gentle slopes, stable soils. | | | |
| Wildlife | Field Review: G. Jackson, 7/07/93 | | Office Review: M. Hall |
| Beaver dams all along upper portion of stream 2. Fawn kill found along stream 2. Level 1 structure retention. | | | |
| Visual/Recreation | Field Review: | | Office Review: S. Bedross, M. Greenig T. Stewart |
| Unit not seen from any priority travel route or use area. Keep below 240' due to visibility from West Coast Waterway. | | | |
| Cultural/Lands | Field Review: | | Office Review: T.W. Greiser, M. Greenig |
| <p>Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit.</p> | | | |
| Interdisciplinary Team Recommendations | | Reviewed By: | |
| Deferred - due to non - CFL. | | | |

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

VCU : 593

UNIT : 424

QUAD : C4-SW



- Revised Control Lake Project Boundary
- Post-Field Unit Boundary w/ Setting Codes
- Other Post-Field Unit Boundaries
- USFS Timber Types for Volc 4-7
- Eagle Tree Buffer of 330ft
- Existing & Rebuilt Roads
- F.S. Roads Under Construction
- Post-Field Proposed Roads
- Ahmu-Class 1 & Stream Chantypes
- Ahmu-Class 2 & Stream Chantypes
- Ahmu-Class 3 & Stream Chantypes
- Channel Type Change

- Lakes and Ponds
- Second Growth Units
- MMI 4
- McGilvery > 41
- Landings
- Stream & Lake NoCUT Buffers

May 16, 1994

.5 MILE

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

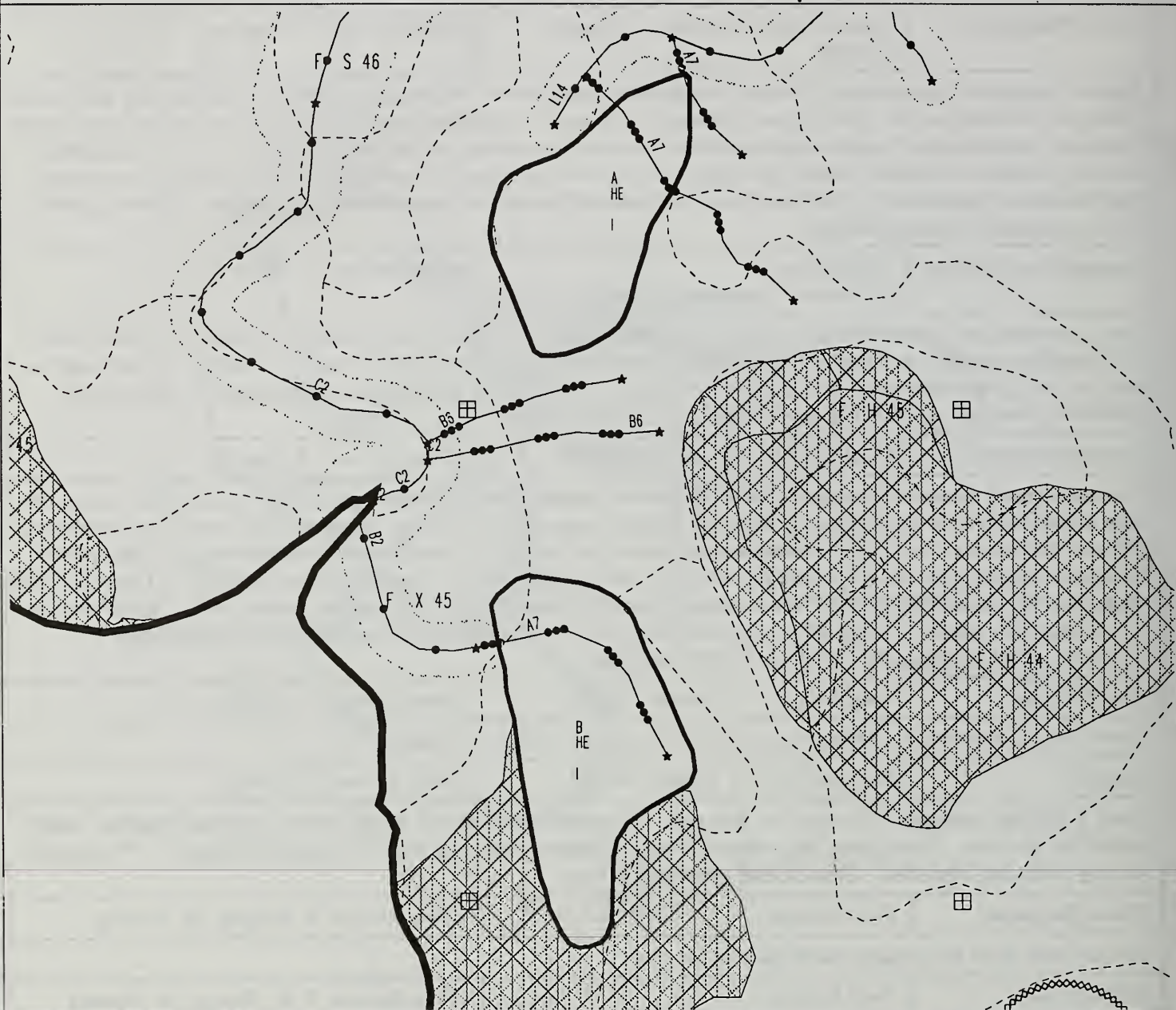
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|---|--|---|--------------------------|
| VCU #: 593 | UNIT #: 424 | QUARTER QUAD: C4SW | PHOTO YR/#: 1991/1990-73 |
| ACRES: 103.8 | VOL.: 2890.2 MBF | LOGGING SYSTEM: Slackline with 70' Tower/Shovel (20%) | |
| LANDSCAPE ZONE: Unit is within Eleven Mile Block. | | | |
| Timber/Vegetation | Field Review: B. Hasebe/J. Goering, 7/30/93 | Office Review: J. Goering | |
| Species composition predominantly hemlock but includes some spruce. Regeneration predominantly hemlock with a few spruce but is lacking cedar. Fairly dense understory vegetation. Windthrow damage evident throughout the unit - heavy in places. Good advanced regeneration (candidate for release) consisting of hemlock and spruce. Low to moderate amounts of mistletoe infection evident in canopy and regeneration. Riparian soils present in the southeast portion with high amounts of salmonberry. Harvest all mistletoe infected hemlock and cut infected regeneration. Promote spruce/cedar regeneration through planting. | | | |
| Logging/Transportation | Field Review: E. Urstadt/J. Herzberg, 7/28/93 | Office Review: J. Doyal | |
| Unit is accessed by Road #71-79-39.3 which is an existing USFS "P"-line. Three spurs are needed. A 70 foot tower with slackline capability and slack pulling carriage is recommended. Shovel log flat areas. A mobile tailhold could be used on the SE boundary where tailholds are fair to poor. Partial cut is possible but not recommended due to high blowdown potential. A Class I stream buffer is on the SW boundary. Fair economics. | | | |
| Watershed/Fisheries | Field Review: G. Jackson, 7/07/93 | Office Review: T. Stewart | |
| One small stream located in southeast portion of unit with suitable habitat for resident and anadromous fish. Log barrier near mainstream makes this a Class II, though it could be removed. This stream requires a 100' no-cut buffer and a 50' selective cut buffer on each side. Gentle sloping surface and outcrops of river gravel at main tributary suggest much drainage is sub-surface. Flood channel of main river required 200' buffer - should form unit boundary. Two other small streams on the southeast side of the unit contained coho fry. These require 100' buffers on each side. The two streams join as they flow south. A Class III stream flows through the western part of the unit roughly from northeast to southwest. This requires split yarding away from the banks. | | | |
| Soils/Geology | Field Review: G. Jackson, 7/07/93 | Office Review: T. Stewart | |
| Gentle slopes, stable soils. Southeast part of unit is very wet in places, but nearly flat. | | | |
| Wildlife | Field Review: C. Confer, 7/07/93 | Office Review: M. Hall | |
| Level 1 structure retention. Surveyed for goshawks - No response. Surveyed for murrelets - presence detected. Bald eagle flew over unit. Recommend eagle nest survey on stream to south and west of unit prior to harvest. Woodpecker feeding cavity(ies) identified. Great horned owl heard in unit. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit not seen from any priority travel route or use area. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Recommend road connection to Sealaska network. Type E overstory removal removing trees 12.0" DBH and larger due to regeneration concerns and for release of understory. Maintain 200' buffer on Class I stream along southwest boundary. Split yard Class III stream in unit. Mitigation measures for this unit are as follows: F5, F6, F8, F10, and W2. Although unit exceeds 100 acres, it is a partial cut. | | | |

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

VCU : 593

UNIT : 425

QUAD : C4-SW



- Revised Control Lake Project Boundary
- Post-Field Unit Boundary w/ Setting Codes
- Other Post-Field Unit Boundaries
- USFS Timber Types for Volc 4-7
- Eagle Tree Buffer of 330ft
- Existing & Rebuilt Roads
- F.S. Roads Under Construction
- Post-Field Proposed Roads
- Ahmu-Class 1 & Stream Chantypes
- Ahmu-Class 2 & Stream Chantypes
- Ahmu-Class 3 & Stream Chantypes
- Channel Type Change

- Lakes and Ponds
- Second Growth Units
- MMI 4
- McGilvery > 41
- Landings
- Stream & Lake NoCUT Buffers

May 16, 1994

.5 MILE

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

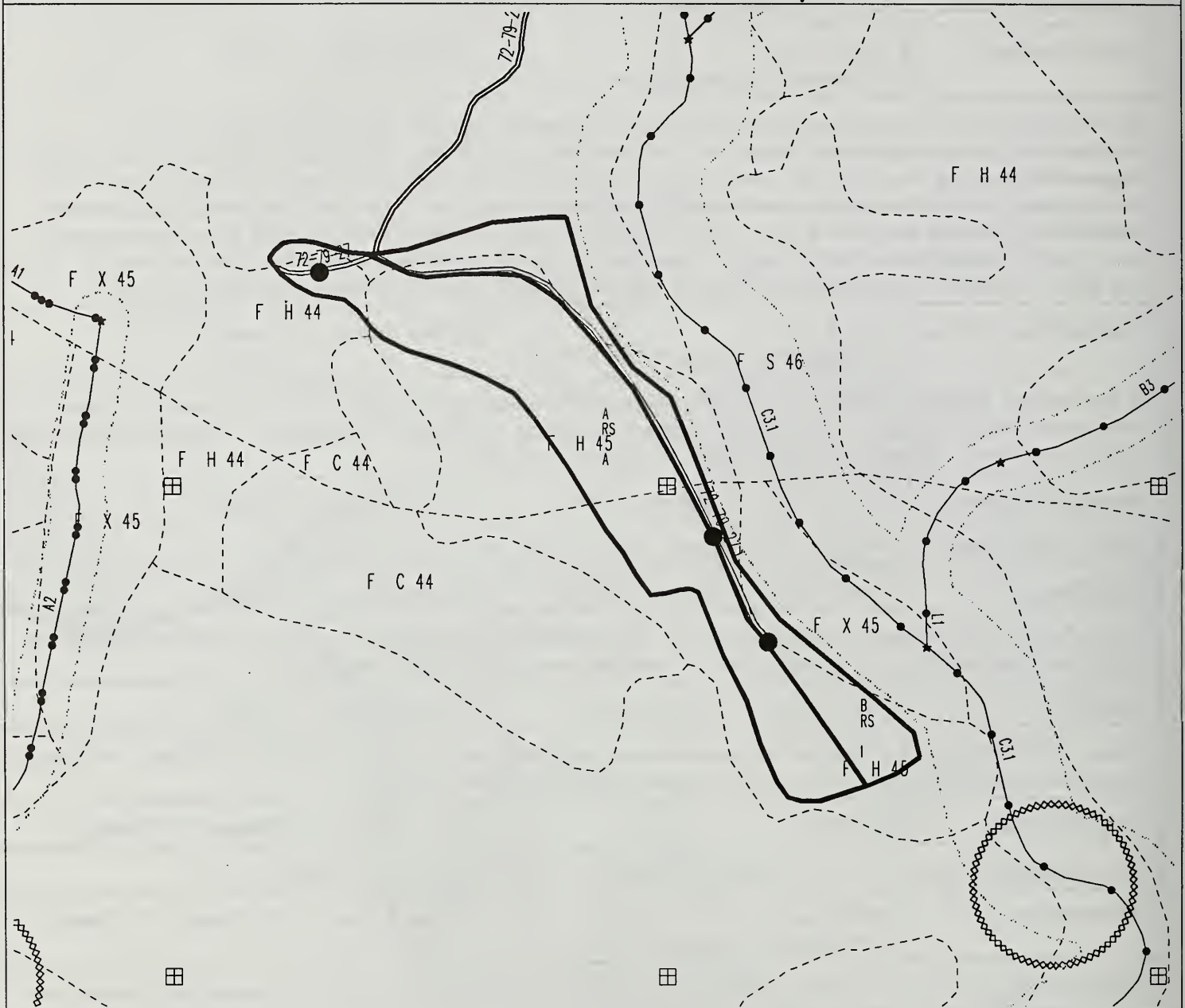
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|---|---|--|--------------------------|
| VCU #: 593 | UNIT #: 425 | QUARTER QUAD: C4SW | PHOTO YR/#: 1991/1990-73 |
| ACRES: 29.4 | VOL.: 518.5 MBF | LOGGING SYSTEM: Helicopter | |
| LANDSCAPE ZONE: Unit is in Eleven-Mile Block. | | | |
| Timber/Vegetation | Field Review: B. Hasebe/J. Goering, 8/20/93 | Office Review: J. Goering | |
| <p>Species composition in the northwest portion predominantly hemlock and cedar with a few lodgepole present. Predominantly hemlock regeneration with a few cedar and spruce. Fairly dense understory vegetation with salal present. Regeneration concerns due to low site index soils, the lodgepole component and the presence of salal. Species composition in the southwest portion predominantly hemlock with some spruce. Few cedar are present. Regeneration predominantly hemlock but includes spruce and a few cedar. Heavy windthrow damage present in southern portion of unit. Little to no mistletoe evident in canopy. Some hemlock fluting. Consider removing unit from unit pool due to size, low quality of northern half and economic costs of harvest. Promote spruce/cedar regeneration through planting.</p> | | | |
| Logging/Transportation | Field Review: E. DeWilde/D. Keister, 7/24/93 | Office Review: K. Jehnke | |
| <p>A road was not attempted to this unit. Over one mile would be needed. Approximately five to seven acres of merch volume was found by engineers. Recommend helicopter yarding as best economical alternative. Flight path to 593-426 is 4800 feet and level. Possibly yard to the ocean. Very poor economics.</p> | | | |
| Watershed/Fisheries | Field Review: G. Jackson, 7/08/93 | Office Review: T. Stewart | |
| Two B6 muskeg streams in western portion of unit. Flagged O/W. No fish habitat observed. | | | |
| Soils/Geology | Field Review: G. Jackson, 7/08/93 | Office Review: T. Stewart | |
| Most of unit is gentle to moderate slopes; however, very steep slopes with McGilvery soils are present on the north and west sides of the hill in the central part of unit. These areas are to be excluded from harvest. | | | |
| Wildlife | Field Review: C. Confer, 7/08/93 | Office Review: M. Hall | |
| Level 1 structure retention. Dropped as a goshawk survey unit due to lack of habitat, but high wildlife use. Bald eagles, marten and sapsucker observed. Surveyed for marbled murrelet, presence identified. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit not seen from any priority travel route or use area. Not seen from West Coast Waterway. | | | |
| Cultural/Lands | Field Review: B. Damone/D. Tingwall, 8/13/93 | Office Review: T. W. Greiser, M. Greenig | |
| <p>Cultural - Unit partially or completely within high probability area for cultural resources. Avoid cultural resource sites on the coast. Recommend moving logs to adjacent unit for hauling. Lands - No state/private or encumbered lands occur adjacent to unit.</p> | | | |
| Interdisciplinary Team Recommendations | | | |
| <p>Unit avoids Class III streams and McGilvery soils. Unit significantly reduced in size from paper plan due to McGilvery soils and less than volume class 4 timber. Cultural concerns and safety concerns over floating debris in well used, high speed boating area make yarding to saltwater unattractive except (perhaps) to a barge. Helicopter yard to 593-426. Type I Group selection cut. Mitigation measures include: F1, F2, and W2.</p> | | | |

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

VCU : 593

UNIT : 426

QUAD : C4-SW



- Revised Control Lake Project Boundary
- Post-Field Unit Boundary w/ Setting Codes
- Other Post-Field Unit Boundaries
- USFS Timber Types for Volc 4-7
- Eagle Tree Buffer of 330ft
- Existing & Rebuilt Roads
- F.S. Roads Under Construction
- Post-Field Proposed Roads
- Ahmu-Class 1 & Stream Chantypes
- Ahmu-Class 2 & Stream Chantypes
- Ahmu-Class 3 & Stream Chantypes
- Channel Type Change

- Lakes and Ponds
- Second Growth Units
- MMI 4
- McGilvery > 41
- Landings
- Stream & Lake NoCUT Buffers

.5 MILE

August 03, 1994

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

| | | | |
|--|---|---|-------------------------|
| VCU #: 593 | UNIT #: 426 | QUARTER QUAD: C4SW | PHOTO YR/#: 1991/790-15 |
| ACRES: 35.1 | VOL.: 959.4 MBF | LOGGING SYSTEM: Swingyard/Running Skyline | |
| LANDSCAPE ZONE: This unit is within Eleven-Mile Block. | | | |
| Timber/Vegetation | Field Review: M. Case, 7/29/93 | Office Review: J. Goering | |
| Species composition includes hemlock, spruce, and cedar. Regeneration predominantly hemlock with some spruce but is lacking cedar. Heavy amount of mistletoe infection evident in canopy. Windthrow damage evident throughout the unit. Fairly dense understory vegetation. Probable salmonberry incursions with soil disturbance based on existing densities throughout unit. Good advanced regeneration (candidate for release) consisting of hemlock and some spruce. Harvest all mistletoe infected hemlock and cut infected regeneration. Promote spruce/cedar regeneration through planting. | | | |
| Logging/Transportation | Field Review: E. DeWilde/D. Keister, 7/28/93 | Office Review: J. Doyal | |
| Unit is accessed by Road #72-79-27.1. The recommended logging system is swing yarding with running skyline. Seventy percent is downhill logging. Partial cut is not feasible on downhill yarding portions. A 300 foot stream buffer is on the east boundary. Some tailholds will need tie-backs. Road costs are very high. Very poor economics. | | | |
| Watershed/Fisheries | Field Review: E. Ablow, 7/08/93 | Office Review: T. Stewart | |
| Class I (C3) stream bounds the eastern side of the unit. It is highly sinuous with braids, side channels, and overflow channels - requires 200' buffer, adding 100' (300' total) to protect side channels and entire floodplain. There are coho fry throughout the stream. Stream 2 (A2) bounds the western side of the unit. It is Class II and requires a 100' buffer. An added 100' was added to the buffer because of steep rock outcrops and McGilvery soils on the northwest end of the stream. | | | |
| Soils/Geology | Field Review: E. Ablow, 7/08/93 | Office Review: T. Stewart | |
| The western side of the proposed unit has a V-notch that has steep side slopes (100%) and McGilvery soils - eliminate it from the unit. The upper eastern and northern portion of the knob is above 80% side slopes and McGilvery soils. | | | |
| Wildlife | Field Review: H. Sloan, 7/08/93 | Office Review: M. Hall | |
| Heavy deer and bear sign/use. Dawn marbled murrelet survey conducted. Occupancy behavior observed. Goshawk survey conducted. No detections. High bald eagle activity near Class I stream on northwest to west border. Eagle nests - one within 500' of boundary, three within 1,000'. Level 1 structure retention. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit not seen from any priority travel route or use area. Not seen from West Coast Waterway. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. The west 1/2 of unit was excluded due to low volume. | | | |
| Interdisciplinary Team Recommendations | | | |
| Type A clearcut above road. Type I group selection below road - leave some spruce and cedar for retention or independent sale. Road 72-79-27 from 593-430 may not be cost effective. Helicopter logging timber to 593-430 would avoid a lengthy road and expensive bridge crossing. Maintain 300' buffer on Class I stream and side channels along eastern boundary. Schedule regeneration survey to address possible salmonberry problems. Mitigation measures for this unit are as follows: F1, F5, F10, and W2 below road; W5, W8, and W12 above road. | | | |

NO UNIT MAP
UNIT DROPPED OR DEFERRED

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

| | | | |
|--|------------------------------------|---|---------------------------|
| VCU #: 593 | UNIT #: 427 | QUARTER QUAD: C4NW | PHOTO YR/#: 1991/4-790-14 |
| ACRES: | VOL.: | LOGGING SYSTEM: | |
| LANDSCAPE ZONE: | | | |
| Timber/Vegetation | Field Review: | Office Review: | |
| | | | |
| Logging/Transportation | Field Review: E. Dewilde | Office Review: E. Urstadt | |
| This unit was field inspected by an engineer. The merchantable timber is located in the buffers. Scrub timber with lodgepole make up the remaining unit. This unit should be dropped for the unit pool. This unit has very poor economics. | | | |
| Watershed/Fisheries | Field Review: B. Rogers, 7/21/93 | Office Review: | |
| Stream 1 needs 100' TTRA buffer. Stream 2 needs 100' TTRA buffer, 200' buffer for slide area on upper end at reach. Stream 3 needs 100' TTRA buffer. | | | |
| Soils/Geology | Field Review: M. Minnillo, 7/21/93 | Office Review: | |
| Slopes along Class I stream are steep and unstable; clay till with many slides. Retain northwest unit boundary above slope break. | | | |
| Wildlife | Field Review: M. Minnillo, 7/21/93 | Office Review: M. Hall | |
| Heavily used habitat by deer and bear. Several beds and moderate to heavy browse throughout, especially along muskegs to the north of unit. Recommend select harvest within 150' of muskeg to north and south. Structure to be retained in Class I stream buffers. Level 1 retention | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit not seen from any priority travel route or use area. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Deferred - due to non - CFL. | | | |

NO UNIT MAP
UNIT DROPPED OR DEFERRED

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

| | | | |
|--|--|---------------------------------------|---------------------------|
| VCU #: 593 | UNIT #: 428 | QUARTER QUAD: C4NW | PHOTO YR/#: 1991/4-790-14 |
| ACRES: | VOL.: | LOGGING SYSTEM: | |
| LANDSCAPE ZONE: | | | |
| Timber/Vegetation | Field Review: | Office Review: | |
| | | | |
| Logging/Transportation | Field Review: T. Wetzel/B. Flatz, 7/31/93 | Office Review: | |
| This unit was dropped due to lack of volume. The timber in the unit was less than 8 MBF per acre with some very scattered patches of occasional merchantable trees. The road construction is moderate with some small sections of full bench. The economic value of this stand is very poor. There was no area where 5 acres of harvestable timber could be found. | | | |
| Watershed/Fisheries | Field Review: B. Rogers, 7/21/93 | Office Review: | |
| No streams within unit. | | | |
| Soils/Geology | Field Review: M. Minnillo, 7/21/93 | Office Review: | |
| McGilvery soils mapped through East half of unit are incorrectly mapped and do not exist. Gentle slopes, small trees, no concerns. | | | |
| Wildlife | Field Review: M. Minnillo, 7/21/93 | Office Review: | |
| Marginal habitat, trees too small to leave any significant snags/structure. No concerns. Level 1 structure retention. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit not seen from any priority travel route or use area. | | | |
| Cultural/Lands | Field Review: | Office Review: | |
| | | | |
| Interdisciplinary Team Recommendations | | | |
| Deferred due to non - CFL. | | | |

NO UNIT MAP
UNIT DROPPED OR DEFERRED

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

| | | | |
|--|--|---|---------------------------|
| VCU #: 593 | UNIT #: 429 | QUARTER QUAD: C4SW | PHOTO YR/#: 1991/5-790-13 |
| ACRES: | VOL.: | LOGGING SYSTEM: | |
| LANDSCAPE ZONE: | | | |
| Timber/Vegetation | Field Review: | Office Review: | |
| Logging/Transportation | Field Review: T. Wetzel/B. Flatz, 7/31/93 | Office Review: | |
| This unit was dropped due to lack of volume. The unit contained mostly timber less than 8 MBF per acre with a few areas of better timber; unfortunately in TTRA buffer areas. The road construction into this area is moderate with small sections of full bench. The economic value of this unit is very poor. There was no area where 5 acres of harvestable timber could be made. | | | |
| Watershed/Fisheries | Field Review: | Office Review: | |
| Streams 1 and 3, B/W, Class IIa, 100' TTRA buffer. If unit includes O/W, IIb split yard. Streams 2 and 3 Class IIa, 100' TTRA buffer. | | | |
| Soils/Geology | Field Review: M. Minnillo, 7/21/93 | Office Review: | |
| McGilvery soils mapped and verified in north end of unit. Full suspension required but recommend dropping north half of unit as full suspension is probably not attainable and area is low site index. | | | |
| Wildlife | Field Review: M. Minnillo, 7/21/93 | Office Review: | |
| Retention level 1. Recommend leaving corridor of trees along stream channel in the southern unit. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit not seen from any priority travel route or use area. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Deferred due to non-CFL. | | | |

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

VCU : 593

UNIT : 430

QUAD : C4-SW



- Revised Control Lake Project Boundary
- Post-Field Unit Boundary w/ Setting Codes
- Other Post-Field Unit Boundaries
- USFS Timber Types for Volc 4-7
- Eagle Tree Buffer of 330ft
- Existing & Rebuilt Roads
- F.S. Roads Under Construction
- Post-Field Proposed Roads
- Ahmu-Class 1 & Stream Chantypes
- Ahmu-Class 2 & Stream Chantypes
- Ahmu-Class 3 & Stream Chantypes
- Channel Type Change

- Lakes and Ponds
- Second Growth Units
- MMI 4
- McGilvery > 41
- Landings
- Stream & Lake NoCUT Buffers

.5 MILE

May 16, 1994

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

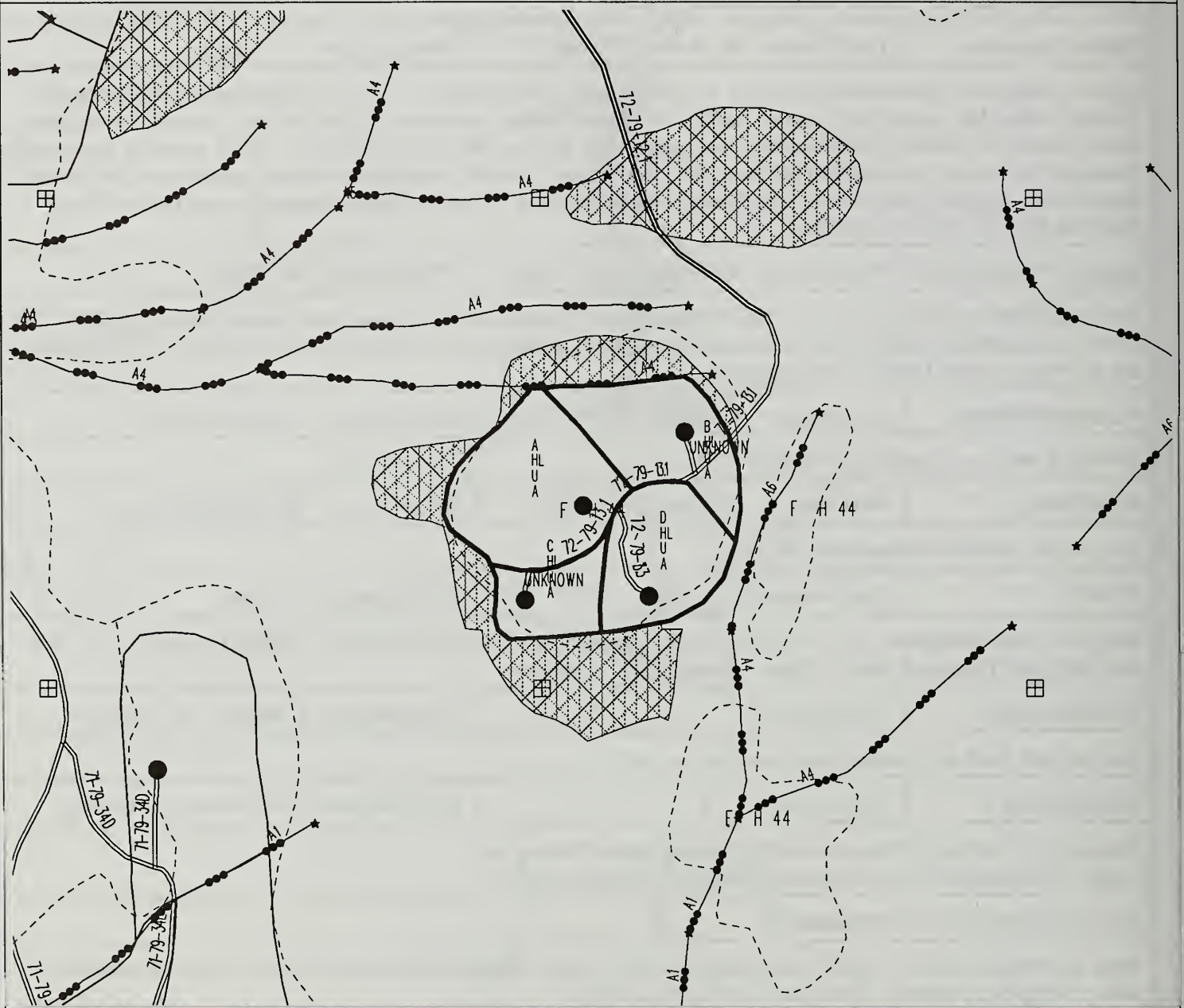
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|---|--|---|-------------------------|
| VCU #: 593 | UNIT #: 430 | QUARTER QUAD: C4SW | PHOTO YR/#: 1991/790-14 |
| ACRES: 22.9 | VOL.: 609.3 MBF | LOGGING SYSTEM: Shovel | |
| LANDSCAPE ZONE: Unit is within Eleven-Mile Block. | | | |
| Timber/Vegetation | Field Review: B. Hasebe, 7/24/93 | Office Review: J. Goering | |
| Species composition predominantly hemlock with some spruce. Few cedar are present. Regeneration predominantly hemlock with a few spruce but is lacking cedar. Windthrow damage evident throughout the unit - heavy in some areas. Heavy amount of mistletoe infection evident in canopy with some evident in the understory. Good advanced regeneration (candidate for release) consisting of hemlock and a few spruce. Harvest all mistletoe infected hemlock and cut infected regeneration. Promote spruce/cedar regeneration through planting. Promote spruce regeneration and future desired condition through overstory removal. | | | |
| Logging/Transportation | Field Review: S. Field/B. Flatz, 7/24/93 | Office Review: M. Whitty | |
| Unit is accessed by Road #72-79-14. Due to dropped units, an alternative road was white flagged east to 593-422. This route is recommended. Shovel log entire unit. Recommend clearcut due to high blowdown potential. The SE boundary has a 100 foot stream buffer. Fair economics. | | | |
| Watershed/Fisheries | Field Review: B. Romey, 7/21/93 | Office Review: G. McNaughton | |
| Streams 1 and 3 are Class IIa, B/W, 100' TTRA. | | | |
| Soils/Geology | Field Review: M. Minnillo, 7/21/93 | Office Review: G. McNaughton | |
| Low slopes. Much old blowdown; wet site. | | | |
| Wildlife | Field Review: M. Minnillo, 7/21/93 | Office Review: M. Hall | |
| Many deer beds throughout unit. Large amount of downed trees and dense reproduction making for good cover. Wet site with heavily browsed skunk cabbage. Retain Level 1 structure. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit not seen from any priority travel route or use area. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Type E overstory removal. Remove all mistletoe infected trees. Maintain 100' buffer on Class II stream southeast of unit. Mitigation measures for this unit are F5, F8, and W2. | | | |













CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD







VCU : 593

UNIT : 431

QUAD : C4-NW



-  Revised Control Lake Project Boundary
-  Post-Field Unit Boundary w/ Setting Codes
-  Other Post-Field Unit Boundaries
-  USFS Timber Types for Volc 4-7
-  Eagle Tree Buffer of 330ft
-  Existing & Rebuilt Roads
-  F.S. Roads Under Construction
-  Post-Field Proposed Roads
-  Ahmu-Class 1 & Stream Chantypes
-  Ahmu-Class 2 & Stream Chantypes
-  Ahmu-Class 3 & Stream Chantypes
-  Channel Type Change

-  Lakes and Ponds
 Second Growth Units
 MMI 4
 McGilvery > 41
 Landings
 Stream & Lake NoCUT Buffers

.5 MILE

May 16, 1994

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

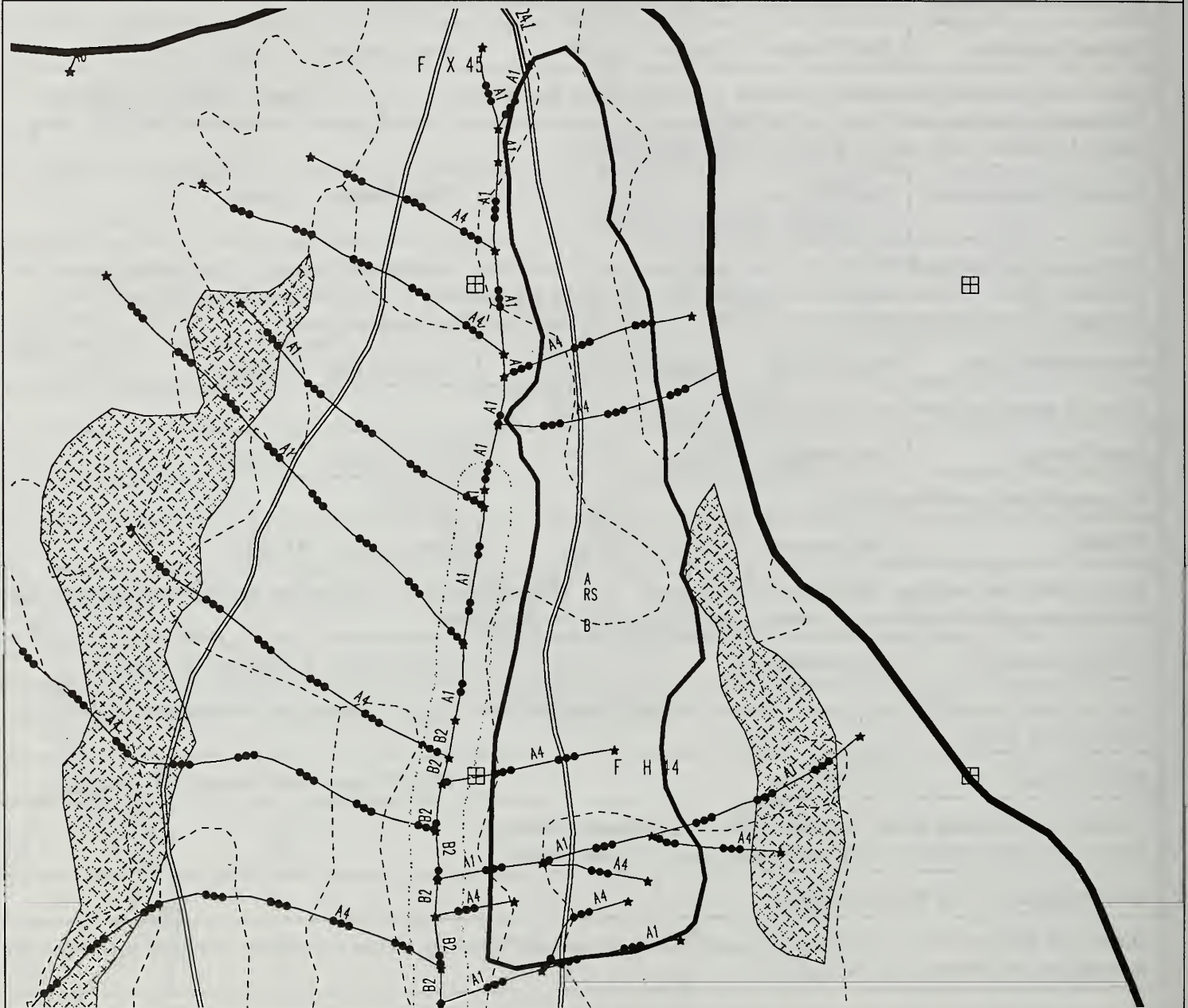
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|--|--|---|--------------------------|
| VCU #: 593 | UNIT #: 431 | QUARTER QUAD: C4NW | PHOTO YR/#: 1991/1990-76 |
| ACRES: 22.9 | VOL.: 245.8 MBF | LOGGING SYSTEM: Highlead with 70' Tower | |
| LANDSCAPE ZONE: Unit is just outside eastern boundary of Eleven-Mile Block. | | | |
| Timber/Vegetation | Field Review: T. Stecher, 7/21/93 | Office Review: J. Goering | |
| Species composition predominantly hemlock and cedar with a few spruce present. Fairly dense understory vegetation. Regeneration predominantly hemlock but includes a few cedar and spruce. Alaska yellow cedar decline evident. Steep relatively shallow soils, and poor soil drainage areas within unit. | | | |
| Logging/Transportation | Field Review: J. Spolar/B. Wilkinson, 7/30/93 | Office Review: J. Doyal | |
| Unit is accessed by Road #72-79-13.1 and three spurs. A 70 foot tower can highlead this unit. One hundred percent of yarding is uphill. Partial suspension is not possible. Tie-backs are expected for tailholds throughout the unit. Two landings will need alternative guys or tie-backs. Partial cut is not feasible. Fair economics. | | | |
| Watershed/Fisheries | Field Review: R. Rogers, 7/19/93 | Office Review: T. Stewart | |
| Class III stream on north and east boundary. Directionally fall. | | | |
| Soils/Geology | Field Review: R. Rogers, 7/19/93 | Office Review: T. Stewart | |
| No unstable soil conditions noted. | | | |
| Wildlife | Field Review: H. Sloan, 7/19/93 | Office Review: M. Hall | |
| Level 1 structure retention. High bear and deer use in unit. Possible bear den. Woodpecker feed cavities identified and woodpecker audible detections. Cruiser detected possible bear den (Plot 6). | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit not seen from any priority travel route or use area. Seen from West Coast Waterway in Middleground. Maximum Modification VQO. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Directional fall trees away from Class III streams on north and east boundary. Type A clearcut. Mitigation measures for this unit are as follows: F6, F8, and W5. | | | |

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

VCU : 594

UNIT : 401

QUAD : C4-NE



- Revised Control Lake Project Boundary
- Post-Field Unit Boundary w/ Setting Codes
- Other Post-Field Unit Boundaries
- USFS Timber Types for Volc 4-7
- Eagle Tree Buffer of 330ft
- Existing & Rebuilt Roads
- F.S. Roads Under Construction
- Post-Field Proposed Roads
- Ahmu-Class 1 & Stream Chantypes
- Ahmu-Class 2 & Stream Chantypes
- Ahmu-Class 3 & Stream Chantypes
- Channel Type Change

- Lakes and Ponds
- Second Growth Units
- MMI 4
- McGilvery > 41
- Landings
- Stream & Lake NoCut Buffers

May 16, 1994

.5 MILE

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

| | | | |
|---|--|---|--------------------------|
| VCU #: 594 | UNIT #: 401 | QUARTER QUAD: C4NE | PHOTO YR/#: 1971/1272-85 |
| ACRES: 49.7 | VOL.: 1456.2 MBF | LOGGING SYSTEM: Swingyarder/Running Skyline | |
| LANDSCAPE ZONE: Unit is within Kogish Mountain Corridor | | | |
| Timber/Vegetation | Field Review: G. Hedin, 7/8/93 | Office Review: J. Goering | |
| Species composition predominantly hemlock with some spruce. Regeneration predominantly hemlock with a few spruce but is lacking cedar. Rocky, steep, relatively thin soils and exposed rock. Rock bluffs on the higher elevations of the unit. Some frost cracks present in spruce. | | | |
| Logging/Transportation | Field Review: B. Webster/T. Wetzel/G. Slawson, 7/7/93 | Office Review: E. Urstadt | |
| Unit is accessed by Road #71-80-24.1. Recommend swing yarding with running skyline. Fifty percent is uphill yarding. Partial suspension can be achieved. Partial cut is not feasible due to steep slopes. A 200 foot stream buffer is on the SW boundary. The east boundary is at base of cliffs. Fair economics. Directional falling away from split yard streams may be difficult since Class III streams are close to each other. | | | |
| Watershed/Fisheries | Field Review: J. Metzler/S. Tanguay, 7/05/93 | Office Review: J. Knutzen | |
| Stream along west boundary is Class III above 950' elevation, Class II below. Sighted numerous trout in Class II portion. Eight Class III tributaries flow through unit. The Class II stream should get a 200' buffer due to unstable slopes within 150' to 180' of channel where subsurface water emerges on a till layer. All other streams should be directionally felled and split yarded. | | | |
| Soils/Geology | Field Review: J. Metzler, 7/05/93 | Office Review: J. Knutzen | |
| Bluffs with thin soils and thin trees above 1,400' elevation in the north and south part of the unit. Keep top line below bluffs. High MMI due to steep slopes and wet site. Attain at least partial suspension where slopes exceed 60%. See watershed/fisheries - small slumps in lower part of stream along west boundary due to subsurface water emerging over till layer. Keep bottom line above this by retaining a 200' buffer on stream. | | | |
| Wildlife | Field Review: S. Tanguay, 7/05/93 | Office Review: M. Hall | |
| Bear and deer sign/use evident. Upper portion of unit had high deer browse; could lower unit boundary due to bluffs. This would provide highly utilized browsing area. Retain Level 1 structure. Contiguous old-growth. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit not seen from any priority travel route or use area. Not seen from West Coast Waterway in Middleground, but close. Maximum Modification VQO. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Leave (approximately 15 acre) patches/strips between Streams 2 and 3; Streams 5 and 6; and Streams 5 and 5A. 200' buffer added to lower half of mainstem stream west of unit for unstable soils. Split yard Class III streams in unit. Potential areas for independent sales due to high spruce content. Type B and D clearcut. Mitigation measures for this unit are as follows: F1, F5, F6, F7, F8, W1, and W4. | | | |

NO UNIT MAP
UNIT DROPPED OR DEFERRED

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

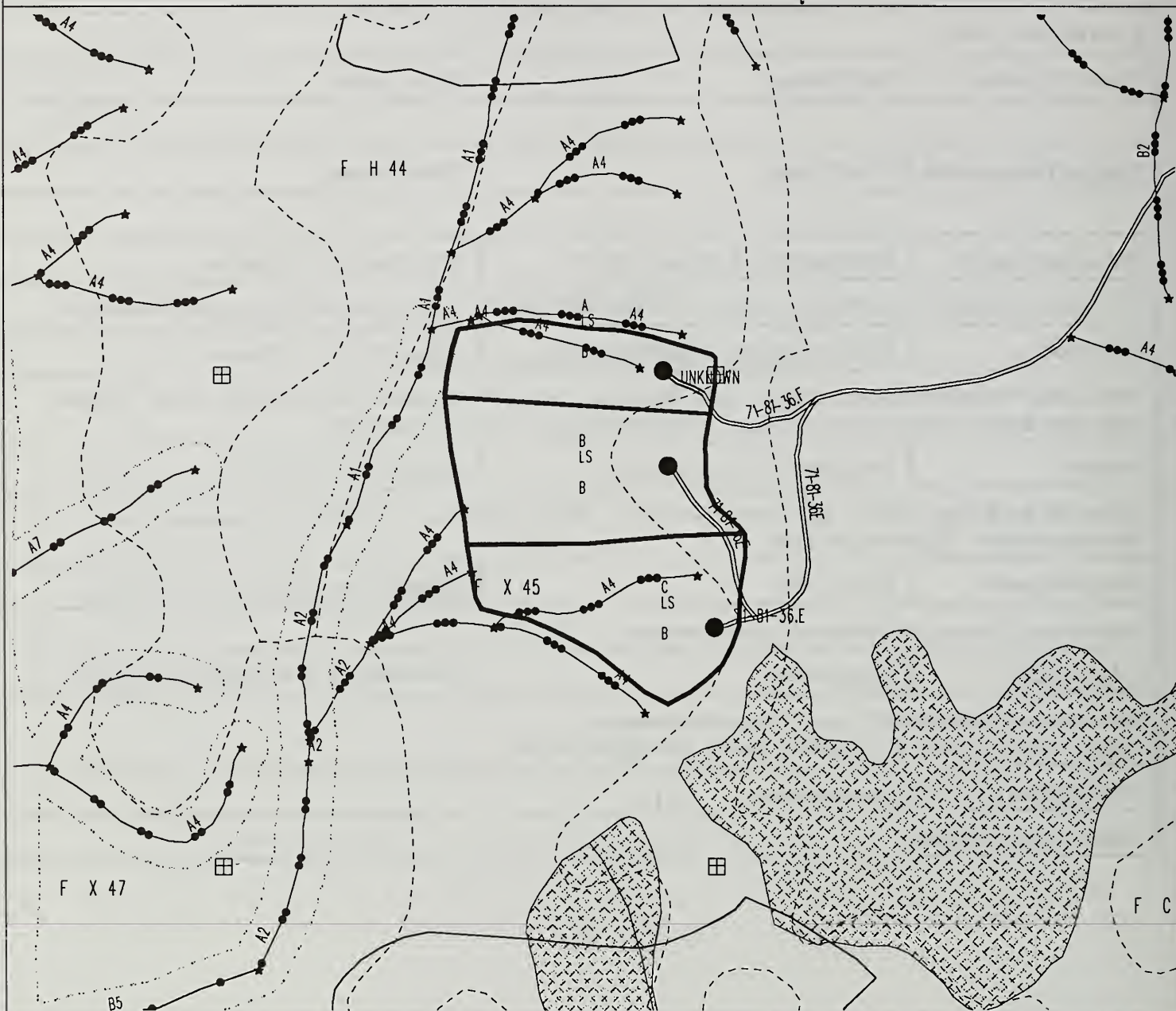
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|---|-----------------------------------|---|--------------------------------|
| VCU #: 594 | UNIT #: 404 | QUARTER QUAD: C3NW | PHOTO YR/#: 1991/12-91-890-132 |
| ACRES: | VOL.: | LOGGING SYSTEM: | |
| LANDSCAPE ZONE: | | | |
| Timber/Vegetation | Field Review: | Office Review: | |
| | | | |
| Logging/Transportation | Field Review: | Office Review: | |
| | | | |
| Watershed/Fisheries | Field Review: B. Romey 6/22/93 | Office Review: T. Stewart | |
| 100' buffer on Stream 2; 100' buffer on stream 1 with an additional 50' selective harvest buffer on B5 channel type. | | | |
| Soils/Geology | Field Review: M. Minnillo 6/22/93 | Office Review: T. Stewart | |
| Small slides throughout steeper portion of unit. Slopes greater than 70-75 percent occur in center of unit. Exclude slides from harvest. Full suspend on slopes > 70% or helicopter log due to instability. | | | |
| Wildlife | Field Review: M. Minnillo | Office Review: M. Hall | |
| Feather the north edge of unit to help prevent windthrow. This could also accommodate 2.75 snags/acre; Level 1 structure retention. High deer use area. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit not seen from any priority travel route or use area. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Deferred due to adjacency. | | | |

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

VCU : 594

UNIT : 405

QUAD : C3-NW



- Revised Control Lake Project Boundary
- Post-Field Unit Boundary w/ Setting Codes
- Other Post-Field Unit Boundaries
- USFS Timber Types for Volc 4-7
- Eagle Tree Buffer of 330ft
- Existing & Rebuilt Roads
- F.S. Roads Under Construction
- Post-Field Proposed Roads
- Ahmu-Class 1 & Stream Chantypes
- Ahmu-Class 2 & Stream Chantypes
- Ahmu-Class 3 & Stream Chantypes
- Channel Type Change

- Lakes and Ponds
- Second Growth Units
- MMI 4
- McGilvery > 41
- Landings
- Stream & Lake NoCUT Buffers

May 16, 1994

.5 MILE

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

| | | | |
|---|---|---|--------------------------|
| VCU #: 594 | UNIT #: 405 | QUARTER QUAD: C3NW | PHOTO YR/#: 1991/890-131 |
| ACRES: 32.3 | VOL.: 784.8 MBF | LOGGING SYSTEM: Live Skyline Shotgun with 70' Tower | |
| LANDSCAPE ZONE: Unit is within Kogish Mountain Corridor. | | | |
| Timber/Vegetation | Field Review: J. Miller, 7/7/93 | Office Review: J. Goering | |
| Species composition predominantly hemlock with some cedar. Few spruce are present. Regeneration predominantly hemlock with a few spruce but is lacking cedar. Windthrow damage present in northern portion of unit. Rock bluffs on the higher elevations of the unit. Steep relatively shallow soils, and poor soil drainage areas within unit. Promote spruce/cedar regeneration through planting. | | | |
| Logging/Transportation | Field Review: E. Dewilde/K. Martin/J. Spolar, 7/6/93 | Office Review: E. Urstadt | |
| Rd #71-81-36 access unit. Two spurs go into unit: 71-81-36E and 71-81-36F. Use a medium (70') tower with a live skyline system to achieve the required partial suspension. Maximum yarding distance is plus or minus 1,000'; 100% is uphill logging. There are some areas that can be shovel logged. Full suspension is not possible unless helicopter logged. Blowdown to adjacent stand can be avoided by leaving a 50' nonmerchantable buffer along adjacent stands. Economics are good. | | | |
| Watershed/Fisheries | Field Review: B. Romey, 6/22/93 | Office Review: T. Stewart | |
| 100' buffer on Class II, Stream 1 southwest of unit (out of unit as laid out). Directional fall with full suspension on streams at north and south boundary. Split yard stream near southern tip of unit if practical (G/W). | | | |
| Soils/Geology | Field Review: M. Minnillo, 6/22/93/J. Metzler, 8/13/93 | Office Review: T. Stewart | |
| Slopes are 40% to 60%. High MMI. Achieve partial suspension on steeper slopes. | | | |
| Wildlife | Field Review: M. Minnillo | Office Review: R. Fairbanks | |
| Feather the north edge of unit to try and reduce windthrow after harvest. Bear and deer sign/use evident. Level 1 structure retention. Hairy woodpecker detection. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit not seen from any priority travel route or use area. Seen from Big Salt Lake in Middleground. Maximum Modification VQO. CVD problems? | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| 100' buffer on Class II stream on west boundary. Split yard Class III streams in north. Class III stream in south of unit not split yarded due to small size and because partial suspension will mitigate water quality impact. Buffer on west stream enlarged to mitigate for unstable slopes. Achieve partial suspension on steeper slopes west of landing. Type B clearcut because of blowdown potential. Mitigation measures for this unit are as follows: F5, F6, F8, and W5. | | | |

NO UNIT MAP
UNIT DROPPED OR DEFERRED

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

| | | | |
|---|---|---|--------------------------|
| VCU #: 594 | UNIT #: 406 | QUARTER QUAD: C3NW | PHOTO YR/#: 1991/890-131 |
| ACRES: | VOL.: | LOGGING SYSTEM: | |
| LANDSCAPE ZONE: | | | |
| Timber/Vegetation | Field Review: T. Stecher/S. Karstens, 7/8/93 | Office Review: J. Goering | |
| Species composition includes hemlock, spruce, and cedar. Regeneration (mostly on nurse logs) is good and consists of hemlock and a few cedar and spruce. Alaska yellow cedar decline evident. Salmonberry present. Unit consists of a steep sloped canyon with a Class III stream in the middle of unit. Steep relatively shallow soils, and poor soil drainage areas within unit. Small shallow landslides and pockets of blowdown present. | | | |
| Logging/Transportation | Field Review: E. DeWilde/K. Martin, 7/7/93 | Office Review: K. Jehnke | |
| This unit had no landing on the proposed roads. However, this unit could be logged from a road that would be constructed when the units west of this unit are harvested. These units were not included in this entry due to adjacency of 89 to 94 units. This access should be available in 6 to 10 years. The unit could be helicopter logged in this entry, but we recommended postponing this unit until the other access is available. | | | |
| Watershed/Fisheries | Field Review: R. Rogers/J. Metzler, 6/23/93 | Office Review: T. Stewart | |
| No fisheries concerns. All streams are Class III. Streams in unit are unstable. Stream at northeast tip - directional fall with full suspension in V-notch; leave nonmerchantable trees within 70' of stream. Stream - directional fall with full suspension in V-notch; leave all nonmerchantable trees <10" DBH within 200' of stream and retain merchantable trees to achieve 70' spacing. Stream has no instability noted; no special protection required running north-south through unit. | | | |
| Soils/Geology | Field Review: R. Rogers/J. Metzler, 6/23/93 | Office Review: T. Stewart | |
| Unstable sideslopes on stream in middle of unit should have full suspension yarding in selective harvest buffer. Rest of unit should have partial suspension. Root strength is low in unit, resulting in mass failure. | | | |
| Wildlife | Field Review: R. Rogers/J. Metzler, 6/23/93 | Office Review: R. Fairbanks | |
| Geese nesting in pond north of unit. High bear use. Retain Level 1 structure; contiguous old-growth. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit not seen from any priority travel route or use area. Seen from Big Slat Lake in Middleground. Maximum Modification VQO. CVD problems? | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | Reviewed By: | |
| Defer unit until road can be brought in from northwest. Proposed Rd #71-81-36 to access unit not flagged. Unit is not feasible unless road adjacent to 89-94 ROD units can access other units to the west in the future. | | | |

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

VCU : 594

UNIT : 407

QUAD : C4-NE



- Revised Control Lake Project Boundary
- Post-Field Unit Boundary w/ Setting Codes
- Other Post-Field Unit Boundaries
- USFS Timber Types for Volc 4-7
- Eagle Tree Buffer of 330ft
- Existing & Rebuilt Roads
- F.S. Roads Under Construction
- Post-Field Proposed Roads
- Ahmu-Class 1 & Stream Chantypes
- Ahmu-Class 2 & Stream Chantypes
- Ahmu-Class 3 & Stream Chantypes
- Channel Type Change

- Lakes and Ponds
- Second Growth Units
- MMI 4
- McGilvery > 41
- Landings
- Stream & Lake NoCUT Buffers

.5 MILE

May 16, 1994

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

| | | | |
|---|--|---|--------------------------|
| VCU #: 594 | UNIT #: 407 | QUARTER QUAD: C4NE | PHOTO YR/#: 1971/1272-86 |
| ACRES: 22.8 | VOL.: 541.7 MBF | LOGGING SYSTEM: Swingyarder/Running Skyline | |
| LANDSCAPE ZONE: Unit in the Kogish Mountain Corridor. | | | |
| Timber/Vegetation | Field Review: J. Miller, 7/10/93 | Office Review: J. Goering | |
| Species composition includes hemlock, spruce, and cedar. Regeneration includes hemlock, cedar, and spruce. Many V-notched streams. Split yard streams. Steep relatively shallow soils, and poor soil drainage areas within unit. | | | |
| Logging/Transportation | Field Review: J. Doyal/ J. Herzberg/K. Keister, 7/28/93 | Office Review: E. Urstadt | |
| Unit is accessed by Road #71-81-26. This road has difficult construction. Field engineer recommends moving road downhill where landings are good. Tailholds on the west boundary are poor due to steep, shallow soils. One hundred percent of yarding will be downhill. Recommend a 70 foot tower using highlead or slack line. Run profiles during final layout to see if partial suspension is possible on the steep west side. A 100 foot buffer is on the east side. The western boundary is below rock bluffs. Feather edges to reduce blowdown potential. Fair economics. Recommend a road south to Sealaska. | | | |
| Watershed/Fisheries | Field Review: J. Metzler/S. Tanguay, 7/03/93 | Office Review: T. Stewart | |
| Unit is bounded by Class III streams on north and south sides. Two other Class III streams flow northwest-southeast across middle of unit. Streams mostly in bedrock. Cutthroat trout sighted at bottom of main stream, below unit. Numerous trout also sighted in Class II stream east of unit. Split yard, directional fall on Class III streams within and adjacent to unit. | | | |
| Soils/Geology | Field Review: J. Metzler, 7/03/93 | Office Review: T. Stewart | |
| Steep slopes in upper portion of unit; some pistol-butted trees, poorly drained soils, but no other indicators of instability. Bluffs above 1500' with shallow soils, non-merchantable trees should be excluded from unit. Achieve partial suspension where slopes are greater than 60%. | | | |
| Wildlife | Field Review: S. Tanguay, 7/03/93 | Office Review: M. Hall | |
| Much deer forage, minimal wildlife sign observed. Buffer lower muskegs by bringing unit boundary away from scrubby timber. Contiguous old-growth; retain Level 1 structure. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit not seen from any priority travel route or use area. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Recommend Type B clearcut with logging system. Boundary lowered below 1500 foot elevation. Split yard two Class III streams. Streams along unit boundaries also need split yarding on the unit side. Unit not laid out within 100 feet of Class II stream at east. Opportunity to connect with Sealaska road system. Achieve partial suspension on slopes greater than 60%. Partial suspension not available for approximately 200' below cliffs. Utilize this 200' strip as leave island. Mitigation measures for this unit are as follows: F1, F3, F6, F8, F10, and W4. | | | |

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

VCU : 594

UNIT : 409

QUAD : C4-NE



- Revised Control Lake Project Boundary
- Post-Field Unit Boundary w/ Setting Codes
- Other Post-Field Unit Boundaries
- USFS Timber Types for Volc 4-7
- Eagle Tree Buffer of 330ft
- Existing & Rebuilt Roads
- F.S. Roads Under Construction
- Post-Field Proposed Roads
- Ahmu-Class 1 & Stream Chantypes
- Ahmu-Class 2 & Stream Chantypes
- Ahmu-Class 3 & Stream Chantypes
- Channel Type Change

- Lakes and Ponds
- Second Growth Units
- MMI 4
- McGilvery > 41
- Landings
- Stream & Lake NoCUT Buffers

June 09, 1994

.5 MILE

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

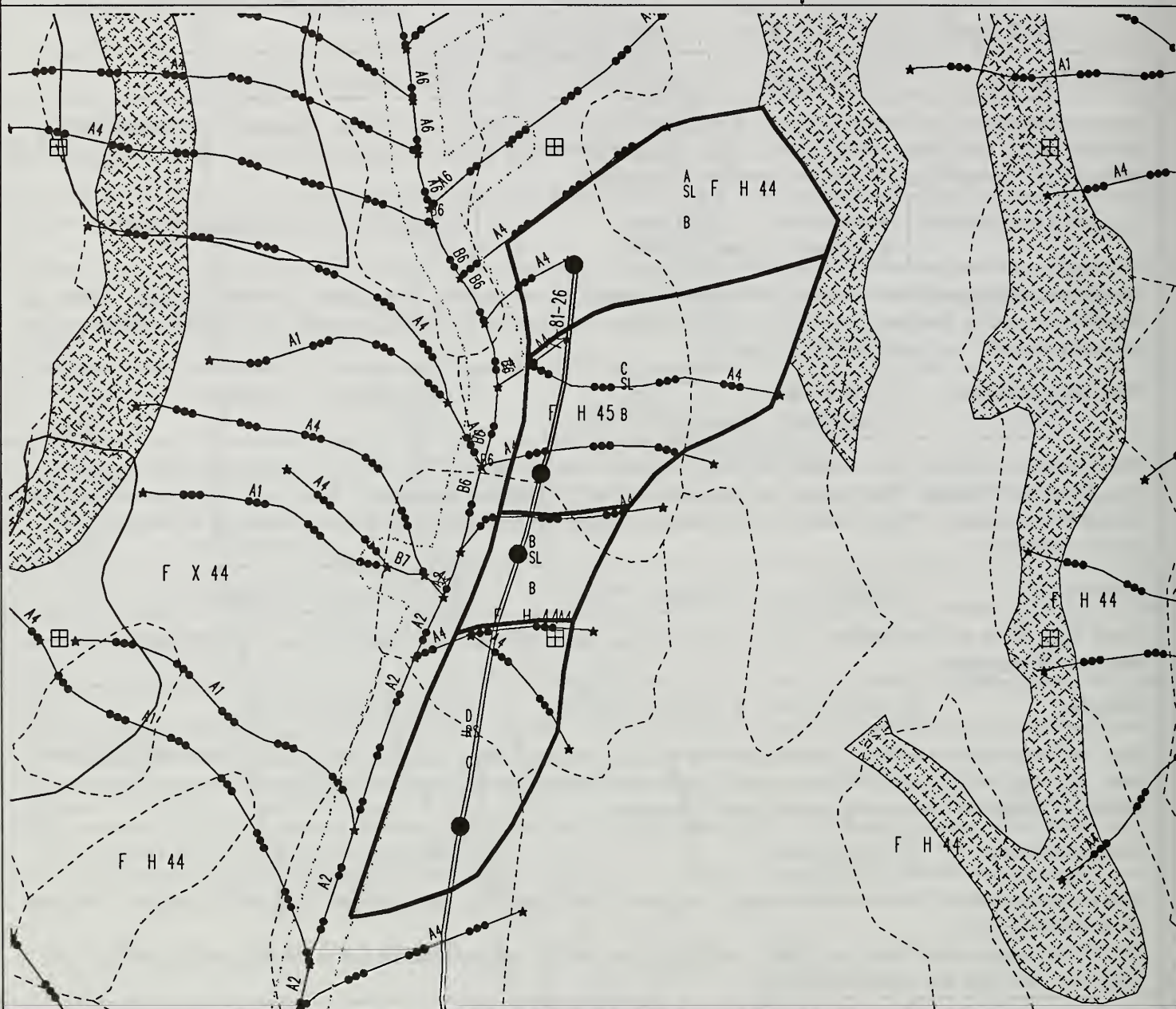
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|---|--|---|---------------------------|
| VCU #: 594 | UNIT #: 409 | QUARTER QUAD: C4NE | PHOTO YR/#: 1991/1190-130 |
| ACRES: 70.0 | VOL.: 2054.1 MBF | LOGGING SYSTEM: Swingyarder/Running Skyline | |
| LANDSCAPE ZONE: Unit is within Kogish Mountain Corridor. | | | |
| Timber/Vegetation | Field Review: G. Hedin, 7/10/93 | Office Review: J. Goering | |
| Species composition predominantly hemlock with some spruce. Few cedar are present. Regeneration predominantly hemlock with a few spruce but is lacking cedar. Rock bluffs on the higher elevations of the unit. Steep, rocky relatively shallow soils. Many Class III stream drainage's within unit. | | | |
| Logging/Transportation | Field Review: B. Wilkinson/ T. Wetzel/G. Stone, 7/08/93 | Office Review: C. Barnhart, 7/30/93 | |
| Recommend swingyarder with running skyline system using several landings along road. Downhill logging. Upper boundary located at bottom of rock bluffs. Partial suspension required and easily obtained. 100' TTRA buffer on west boundary of unit. Accessed by Rd #71-80-24.1. | | | |
| Watershed/Fisheries | Field Review: J. Metzler/S. Tanguay, 7/05/93 | Office Review: J. Knutzen | |
| Class II stream with two side channels that were observed to have fish and flagged B/W run along the west boundary. Four Class III tributaries flow through the unit and into the fish-bearing streams with lower part of one in mid unit Class II with B/W flagging. These should be split yarded to reduce the risk of impacting water quality in the adjacent fish-bearing stream. | | | |
| Soils/Geology | Field Review: J. Metzler, 7/05/93 | Office Review: J. Knutzen | |
| Bluffs throughout unit and shallow soils. Achieve at least partial suspension where slopes are > 60% (most of unit) to minimize disturbance. | | | |
| Wildlife | Field Review: S. Tanguay, 7/05/93 | Office Review: M. Hall | |
| Deer and bear sign/use evident. Include riparian area in corridor design; high deer use in upper portion of unit; bluff area. Propose moving unit/road above top of slope approximately 100' to maintain wildlife corridor and year-round habitat. Contiguous old-growth; retain Level 1 structure. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit not seen from any priority travel route or use area. Seen from West Coast Waterway in Middleground. Maximum Modification VQO. Provide access to alpine valley and lakes. Build trail just north of unit to Shinaku Lakes. Build parking area for 3-4 vehicles; close road beyond parking area. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Northern and eastern boundaries reduced to prevent harvest on unstable soils. Type G shelterwood within south 1/2. Type B clearcut in north half. Maintain 100' buffer on Class II stream west of unit. Achieve partial suspension in high slope areas. Mitigation measures for this unit are: F3, F5, F6, F10, W2 in south 1/2, and W4 in north 1/2. | | | |

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

VCU : 594

UNIT : 410

QUAD : C4-NE



- Revised Control Lake Project Boundary
- Post-Field Unit Boundary w/ Setting Codes
- Other Post-Field Unit Boundaries
- USFS Timber Types for Volc 4-7
- Eagle Tree Buffer of 330ft
- Existing & Rebuilt Roads
- F.S. Roads Under Construction
- Post-Field Proposed Roads
- Ahmu-Class 1 & Stream Chantypes
- Ahmu-Class 2 & Stream Chantypes
- Ahmu-Class 3 & Stream Chantypes
- Channel Type Change

- Lakes and Ponds
- Second Growth Units
- MMI 4
- McGilvery > 41
- Landings
- Stream & Lake NoCUT Buffers

October 02, 1995

0.5 MILE

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

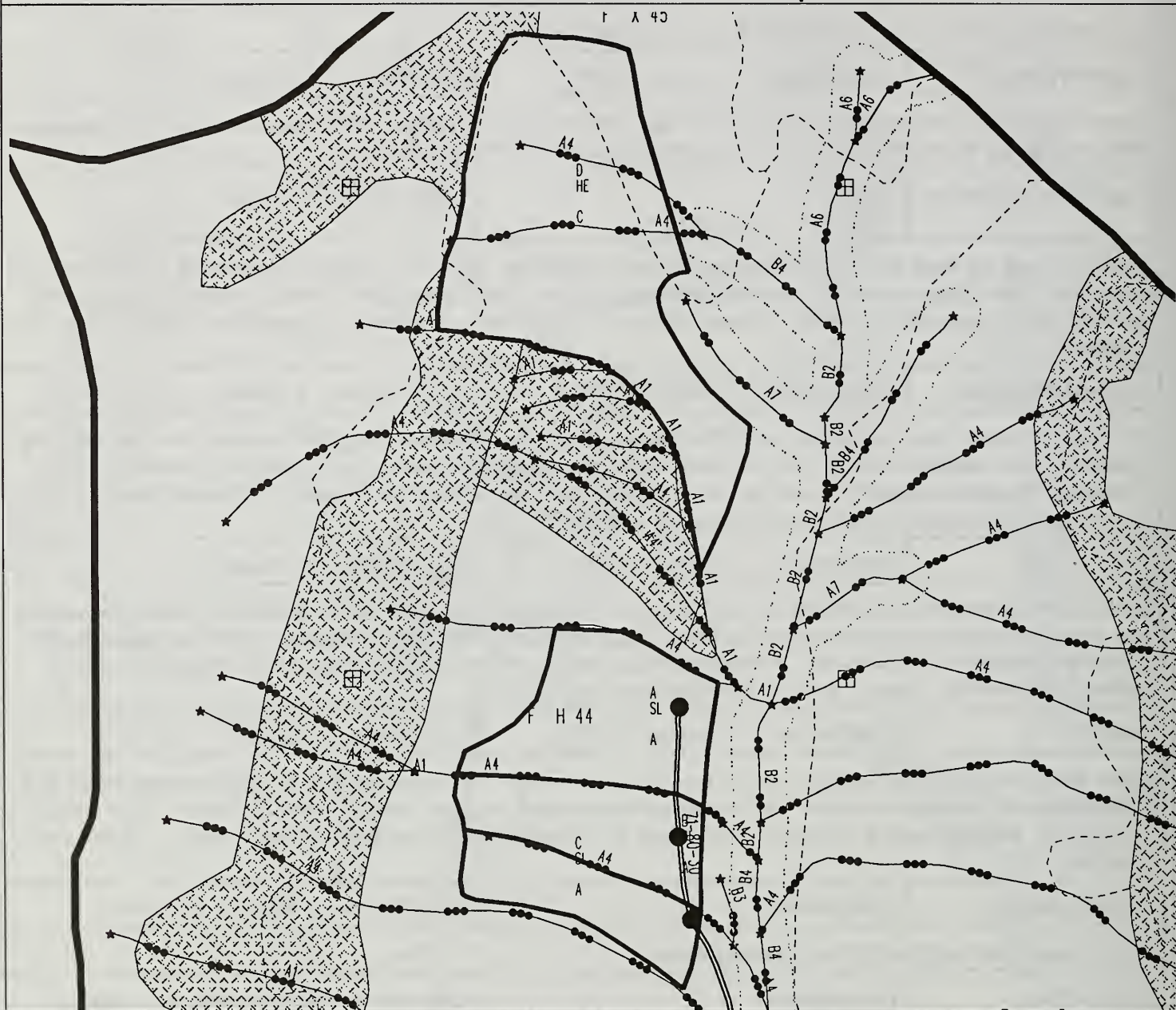
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|---|--|--|---------------------------|
| VCU #: 594 | UNIT #: 410 | QUARTER QUAD: C4NE | PHOTO YR/#: 1971/1572-117 |
| ACRES: 52.9 | VOL.: 1388.4 MBF | LOGGING SYSTEM: Swingyard South 1/2 with Running Skyline, Slackline with 100' Tower in North 1/2 | |
| LANDSCAPE ZONE: Unit is within the Kogish Mountain Corridor. | | | |
| Timber/Vegetation | Field Review: T. Stecher, 7/15/93 | Office Review: J. Goering | |
| Species composition predominantly hemlock and cedar with a few spruce present. Regeneration predominantly hemlock with some spruce but is lacking cedar. Rock bluffs and boulder strewn slopes present. | | | |
| Logging/Transportation | Field Review: J. Graves/J. Doyal, 7/15/93 | Office Review: M. Whitty | |
| Unit is accessed by Road #71-81-26, which has difficult construction. A swing yarder is recommended for the south half of the unit. Use a large tower with slackline capability to achieve partial suspension. Tailholds are fair to poor on the east side and tie-backs will be needed. The east boundary is a 100 foot stream buffer. Avoid slides in the SW unit. Fair economics. | | | |
| Watershed/Fisheries | Field Review: J. Metzler, 7/08/93 | Office Review: T. Stewart | |
| Six Class III streams flow through the unit into a deeply incised Class II stream along the western edge of the unit. The Class III streams should be split yarded and northernmost stream should be used as the northern unit boundary. The western unit boundary should be located on the topographic break above the Class II stream (100' to 300' away). The inner gorge of this stream is very steep with bedrock outcrops. | | | |
| Soils/Geology | Field Review: J. Metzler, 7/08/93 | Office Review: T. Stewart | |
| Some instability evident along western boundary associated with fault zone. This will be avoided by locating the western unit boundary along the topographic break above the Class II stream. The northern boundary should be kept south of Stream 1 to exclude a bluff/wet area. Numerous short, broken bluffs throughout the eastern half of the unit but no evidence of instability. Achieve partial suspension where slopes > 60% | | | |
| Wildlife | Field Review: S. Tanguay, 7/09/93 | Office Review: M. Hall | |
| Game trails throughout unit; moderate to high deer browse observed. The main stream at the west boundary would be a consideration for landscape corridor. The incision and steep slopes preclude timber harvest this corridor. Low wildlife sign in unit. Muskeg complex above unit. Lower end of unit may potentially be large riparian corridor. Retain Level 1 structure. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit not seen from any priority travel route or use area. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Type G shelterwood in south 1/3. Type B clearcut in north 2/3. Potential problem with split yarding southern fork of stream in lower portion of unit. Eastern boundary moved west to avoid unstable soils. Western boundary buffered at least 100' for TTRA buffer and steep unstable slopes. Mitigation measures for this unit are: F1, F3, F5, F6, F8, F10, W2 in south 1/3, and W4 in north. | | | |

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

VCU : 594

UNIT : 411

QUAD : C4-NE



- Revised Control Lake Project Boundary
- Post-Field Unit Boundary w/ Setting Codes
- Other Post-Field Unit Boundaries
- USFS Timber Types for Volc 4-7
- Eagle Tree Buffer of 330ft
- Existing & Rebuilt Roads
- F.S. Roads Under Construction
- Post-Field Proposed Roads
- Ahmu-Class 1 & Stream Chantypes
- Ahmu-Class 2 & Stream Chantypes
- Ahmu-Class 3 & Stream Chantypes
- Channel Type Change

- Lakes and Ponds
- Second Growth Units
- MMI 4
- McGilvery > 41
- Landings
- Stream & Lake NoCUT Buffers

.5 MILE

May 16, 1994

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

| | | | |
|---|--|--|--------------------------|
| VCU #: 594 | UNIT #: 411 | QUARTER QUAD: C4NE | PHOTO YR/#: 1991/1290-18 |
| ACRES: 51.3 | VOL.: 1575 MBF | LOGGING SYSTEM: Slackline with 100' Tower (South), Helicopter (North) | |
| LANDSCAPE ZONE: Unit is within the Kogish Mountain Corridor. | | | |
| Timber/Vegetation | Field Review: M. Case, 7/19/93 | Office Review: J. Goering | |
| Species composition predominantly hemlock but includes some spruce and cedar. Regeneration predominantly hemlock with some spruce but is lacking cedar. Steep, rocky relatively shallow soils, and poor soil drainage areas within unit. Some areas of moderately low volume, mixed species with < 50% canopy closure. | | | |
| Logging/Transportation | Field Review: E. DeWilde/C. Giles/D. Keister, 7/17/93 | Office Review: C. Barnhart | |
| Unit is accessed by Road #70-80-30. This road could not be extended to the north due to grade restrictions. Recommend a 100 foot tower with slackline system on south setting. Recommend helicopter logging north setting. Partial suspension is possible on cable settings. Tailholds are poor on the west boundary and tie-backs will be needed. Partial cut is not feasible due to steep slopes. A 100 foot stream buffer is the east boundary. The central part of the unit was excluded due to unstable soils. Fair to poor economics. | | | |
| Watershed/Fisheries | Field Review: J. Metzler/S. Tanguay, 7/6/93 | Office Review: T. Stewart | |
| Numerous shallow to deeply incised V-notches flow east through unit to a Class II stream at bottom of slope. Class II stream requires a 100' buffer and the Class III's should have directional falling and split yarding. Retention of non-merchantable trees within 70' of Stream 3 is also required to retain root strength along this stream which has experienced a debris flow. The unit boundary should be kept west of Stream 4 to avoid a very wet, floodplain area. | | | |
| Soils/Geology | Field Review: J. Metzler, 7/6/93 | Office Review: T. Stewart | |
| Steep slopes with bluffs along the top boundary. Achieve at least partial suspension where slopes > 60% to minimize soil disturbance. Central portion of unit has been deleted due to very high MMI - extremely wet, high V-Notch density, debris flows, and bluffs. | | | |
| Wildlife | Field Review: S. Tanguay, 7/06/93 | Office Review: M. Hall | |
| Heavy deer use in lower unit. Neotropical migrants observed in MMI deletion area. Attempt to leave Class II stream and adjacent footslopes out of units for wildlife corridor. Steep V-notch channels mid-slope act as movement barrier. Contiguous old-growth; retain Level 1 structure. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit not seen from any priority travel route or use area. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Type A clearcut in south setting. Type C clearcut in north helicopter setting (411B). Maintain 100' buffer on Class II stream. MMI4 excluded from unit. Maintain 100' buffer on Class II stream east boundary. Directional fall and split yard Class III streams. Retain non-merchantable trees within 70' of stream in middle of setting A. Mitigation measures for this unit are: F1, F2, F3, F5, F6, F8, F10, W3, and W5. | | | |

QUAD : C4-NE



408

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

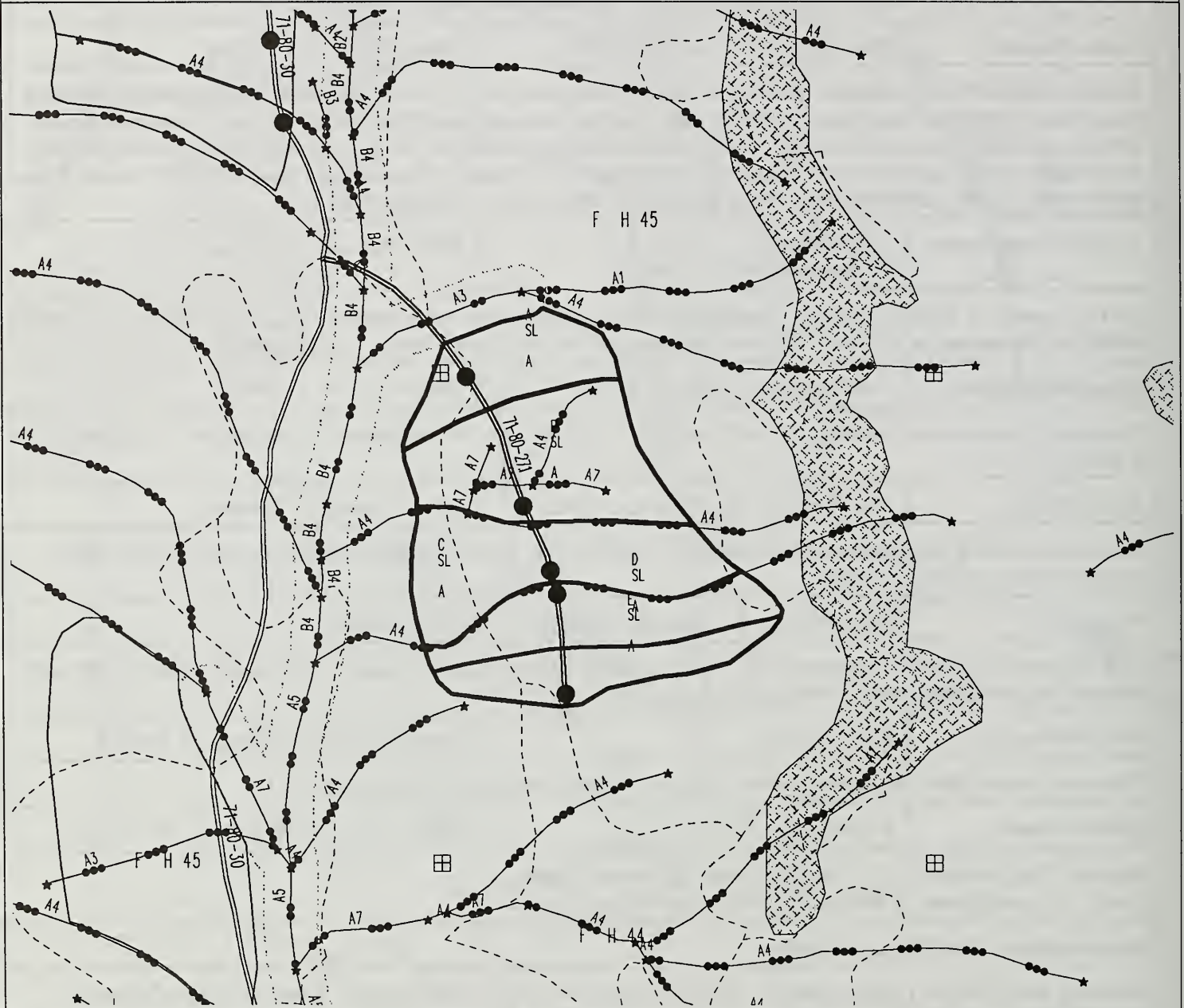
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|--|--|---|---------------------------|
| VCU #: 594 | UNIT #: 412 | QUARTER QUAD: C4NE | PHOTO YR/#: 1971/1072-213 |
| ACRES: 20.4 | VOL.: 489.1 MBF | LOGGING SYSTEM: Swingyarder/Running Skyline, Shovel | |
| LANDSCAPE ZONE: Unit is north of Big Salt Lake, but outside the Kogish Mountain Corridor. | | | |
| Timber/Vegetation | Field Review: B. Hedin, 7/16/93 | Office Review: J. Goering | |
| Species composition predominantly hemlock and cedar with a few spruce present. Regeneration predominantly hemlock but includes a few cedar and spruce. Shallow soils overlying bedrock. Rock bluffs on the higher elevations of the unit. Little to no mistletoe evident in canopy. Fairly dense understory vegetation. Slope instability/failure potential existing due to shallow soils, and poor soil drainage in western portion. Western portion contains moderately low volume, mixed species with < 50% canopy closure. Many small seeps, and poor soil drainage areas. | | | |
| Logging/Transportation | Field Review: H. Wilcox/C. Giles, 7/14/93 | Office Review: C. Barnhart | |
| Unit is accessed by Road #71-80-30. Recommend a swing yarder. Run more profiles during final layout to confirm that partial suspension can be achieved. The east boundary is a 100 foot stream buffer. Good economics. | | | |
| Watershed/Fisheries | Field Review: B. Rogers, 7/05/93 | Office Review: T. Stewart | |
| Unflagged, incised channel present. Class III are O/W - split yard, or full suspension. Class II needs 100' buffer (Class II into Class I). | | | |
| Soils/Geology | Field Review: M. Minnillo, 7/05/93 | Office Review: T. Stewart | |
| Recommend moving upper (western unit boundary) down to 1200' to avoid 100% or greater slopes. Achieve partial suspension due to wet, steep slopes. | | | |
| Wildlife | Field Review: M. Minnillo, 7/05/93 | Office Review: | |
| High use deer cover/forage throughout unit. Soils recommendation to maintain west unit boundary. Below 1,200' will maintain high use deer habitat. Retain Level 2 structure. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit is not visible from any priority travel routes or use areas. Maximum Modification VQO. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Boundary moved below 1,200' elevation. Class II on east side requires 100' buffer. Leave small leave islands of difficult timber along interior boundary creeks. Recommend Type B clearcut for Level 2 structure. Achieve maximum possible partial suspension. Mitigation measures for this unit are: F3, F4, F5, F6, F8, F10, and W4. | | | |

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

VCU : 594

UNIT : 413

QUAD : C4-NE



- Revised Control Lake Project Boundary
- Post-Field Unit Boundary w/ Setting Codes
- Other Post-Field Unit Boundaries
- USFS Timber Types for Volc 4-7
- Eagle Tree Buffer of 330ft
- Existing & Rebuilt Roads
- F.S. Roads Under Construction
- Post-Field Proposed Roads
- Ahmu-Class 1 & Stream Chantypes
- Ahmu-Class 2 & Stream Chantypes
- Ahmu-Class 3 & Stream Chantypes
- Channel Type Change

- Lakes and Ponds
- Second Growth Units
- MMI 4
- McGilvery > 41
- Landings
- Stream & Lake NoCUT Buffers

.5 MILE

June 09, 1994

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

| | | | |
|---|---|---|--------------------------|
| VCU #: 594 | UNIT #: 413 | QUARTER QUAD: C4NE | PHOTO YR/#: 1991/1290-17 |
| ACRES: 36.9 | VOL.: 1514.4 MBF | LOGGING SYSTEM: Slackline, Live Skyline | |
| LANDSCAPE ZONE: Unit is north of Big Salt Lake, but outside the Kogish Mountain Corridor. | | | |
| Timber/Vegetation | Field Review: B. Hasebe, 7/17/93 | Office Review: J. Goering | |
| Species composition predominantly hemlock with some spruce. Few cedar are present. Regeneration predominantly hemlock with a few spruce but is lacking cedar. Rock bluffs on the higher elevations of the unit. Steep relatively shallow soils, and poor soil drainage areas within unit. Slope instability/failure potential existing due to poor soil drainage. Evidence of previous slides present. Western portion has moderately low volume yellow cedar and mixed species with <50% canopy closure. | | | |
| Logging/Transportation | Field Review: E. DeWilde/D. Keister, 7/10/93 | Office Review: J. Doyal | |
| Unit is accessed by Road #71-80-27.1. Recommend a 100 foot tower with slackline capability. Ninety percent is downhill logging. Partial suspension can be achieved. The east boundary avoids unstable soils and bluffs. Partial cut is not practical because of downhill logging. Blowdown is a concern. Good economics. | | | |
| Watershed/Fisheries | Field Review: J. Metzler/S. Tanguay, 7/02/93 | Office Review: T. Stewart | |
| Numerous small, Class III streams within the unit that flow into a Class II downstream of the unit. Split yard and directional fall to minimize disturbance to banks and avoid diversion of flow. The stream along the north boundary has experienced a debris flow in the past. It spreads into several channels below 1,200' elevation where lower gradient. Keep north unit boundary at least 25' to south. | | | |
| Soils/Geology | Field Review: J. Metzler, 7/02/93 | Office Review: T. Stewart | |
| Numerous short, broken bluffs throughout unit especially above 1,400' elevation. Shallow soils on bluffs; put top line below as shown on topographic map. Achieve at least partial suspension on high MMI soils found throughout unit. | | | |
| Wildlife | Field Review: S Tanguay, 7/02/93 | Office Review: M. Hall | |
| Moderate deer use. Low bear use. Woodpecker cavities observed in unit. Recommend buffer on unproductive old-growth and muskeg east of unit by keeping unit boundary to west of scrub. Retain Level 1 structure. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit not seen from any priority travel route or use area. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Boundary placed below bluffs. Directional fall and split yard Class III streams. Maintain 100' buffers on Class II unit at north end. Achieve partial suspension on unit. Retain area uphill from Streams 2, 3, and 5. Type A harvest. Mitigation measures for this unit are: F1, F2, F3, F5, F6, F8, F10, and W5. | | | |

QUAD : C4-NE



CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

| | | | |
|---|---|--|---------------------------|
| VCU #: 594 | UNIT #: 415 | QUARTER QUAD: C4NE | PHOTO YR/#: 1991/1190-131 |
| ACRES: 82.1 | VOL.: 2417 MBF | LOGGING SYSTEM: Live Skyline with 70' Tower/Highlead | |
| LANDSCAPE ZONE: Unit is within the Kogish Mountain Corridor. | | | |
| Timber/Vegetation | Field Review: M. Case/J. Goering, 7/13/93 | Office Review: J. Goering | |
| Species composition predominantly hemlock and cedar with a few spruce present. Predominantly hemlock regeneration. Lacking spruce and western red cedar regeneration. Windthrow damage evident throughout the unit in areas of thin soils and rock outcrops. Areas of shallow soils overlying bedrock. Rocky soils and poor soil drainage areas within unit. Rockslides present in the southern half. Muskeg incursions incorporated with mixed species, low volume timber along the eastern boundary. Northern half consists of a short slope with unproductive area above and below. Road bisects small productive site. Relocate road to minimize loss to site productivity. | | | |
| Logging/Transportation | Field Review: J. Doyal/J. Herzberg/D. Keister, 7/12/93 | Office Review: E. Urstadt | |
| Unit is accessed by Road #71-81-7.1C. An alternate was tried at the top of the unit but it lacked adequate landings. Recommend using a 70 foot tower using shotgun and highlead systems. The center of the unit lacks an adequate landing; a swing yarder may work here. Partial suspension is possible on the eastern settings. Tailholds on the east and west boundaries may require tie-backs. Fair economics. Look at possibility of a road connecting to Sealaska road system to the south. | | | |
| Watershed/Fisheries | Field Review: B. Romey, 7/03/93 | Office Review: T. Stewart | |
| Stream east of unit is a Class 1, 100' buffer. Streams 2, 3, and 4 are water quality Class III. Streams 2 & 4 should be directionally fell. Stream 3 should be split yarded. | | | |
| Soils/Geology | Field Review: M. Minnillo, 8/14/93 | Office Review: T. Stewart | |
| There was no evidence of instability, however steep slopes > 60% will require partial suspension (eastern half of unit primarily). | | | |
| Wildlife | Field Review: M. Minnillo, 8/14/93 | Office Review: R. Fairbanks | |
| Recommend maintaining eastern unit boundary above (to the west of) muskeg to maintain edge cover along riparian zone and muskeg. Recommend leaving a corridor through the middle of unit along stream approximately 100' to 200' wide from the east to the west side of unit. This would provide a travel corridor from lower elevation to higher elevation muskeg/alpine. Retain Level 1 structure. Two brown creepers observed within unit boundary. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit not seen from any priority travel route or use area. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Directional fall and split yard Class III streams. Achieve partial suspension on slopes > 60%. Leave 100' no-cut buffer on both sides of Class III stream through middle of unit to maintain travel corridor from lower to higher elevation. Relocate road in north half. Type B and D clearcut. Mitigation measures for this unit are: F3, F5, F6, F8, and W4. | | | |

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

VCU : 594

UNIT : 416

QUAD : C4-NE



- Revised Control Lake Project Boundary
- Post-Field Unit Boundary w/ Setting Codes
- Other Post-Field Unit Boundaries
- USFS Timber Types for Volc 4-7
- Eagle Tree Buffer of 330ft
- Existing & Rebuilt Roads
- F.S. Roads Under Construction
- Post-Field Proposed Roads
- Ahmu-Class 1 & Stream Chantypes
- Ahmu-Class 2 & Stream Chantypes
- Ahmu-Class 3 & Stream Chantypes
- Channel Type Change

- Lakes and Ponds
- Second Growth Units
- MMI 4
- McGilvery > 41
- Landings
- Stream & Lake NoCUT Buffers

March 17, 1995

.5 MILE

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

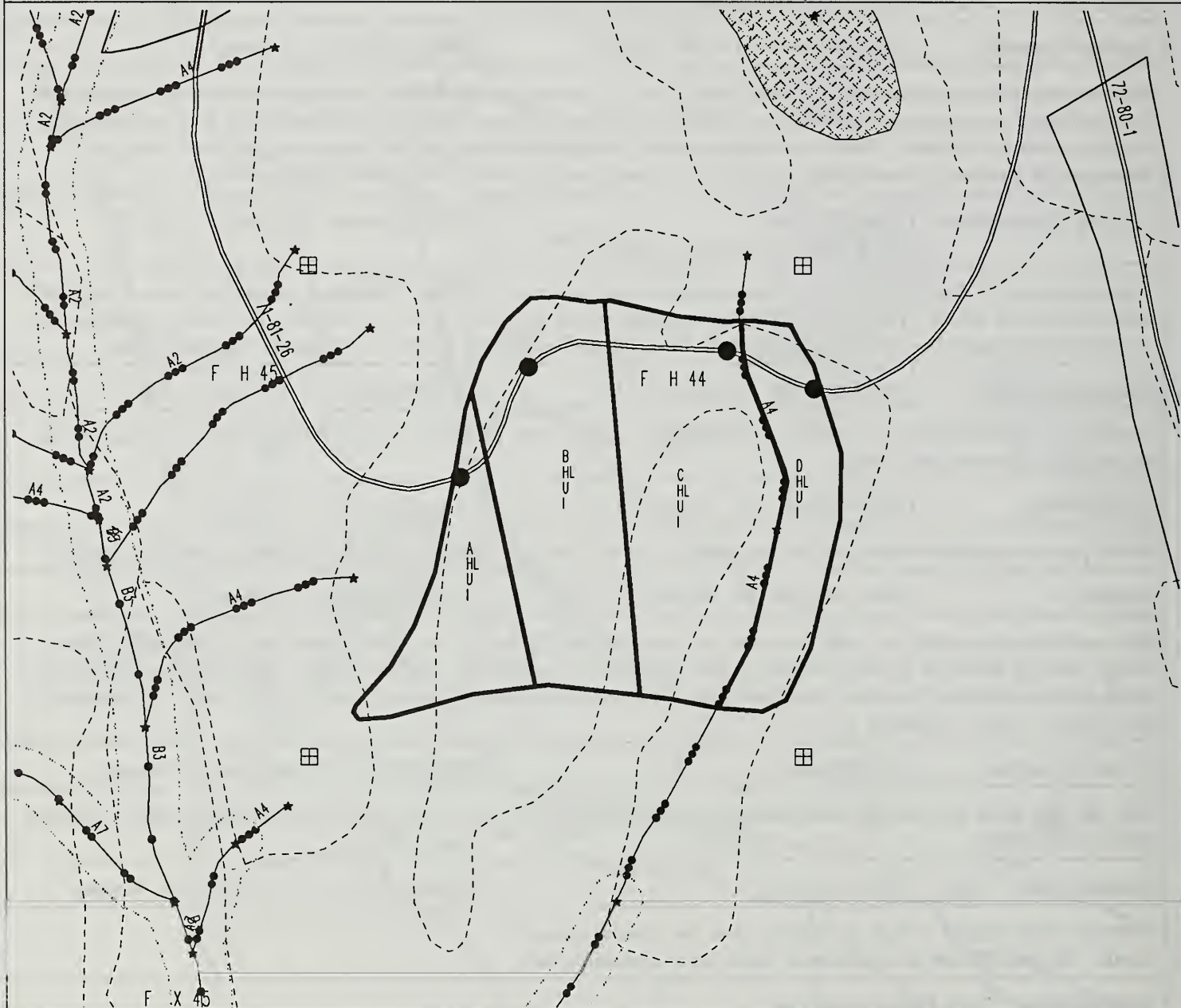
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|---|--|---|---------------------------|
| VCU #: 594 | UNIT #: 416 | QUARTER QUAD: C4NE | PHOTO YR/#: 1991/1190-131 |
| ACRES: 67.0 | VOL.: 1336.2 MBF | LOGGING SYSTEM: Swingyarder/Running Skyline | |
| LANDSCAPE ZONE: Unit is within the Kogish Mountain Corridor. | | | |
| Timber/Vegetation | Field Review: M. Case, 7/14/93 | Office Review: J. Goering | |
| Species composition predominantly hemlock and cedar with a few spruce present. Predominantly hemlock regeneration. Good advanced regeneration (candidate for release) consisting of cedar. Rocky, relatively shallow soils, and poor soil drainage areas within unit. Windthrow damage evident throughout the unit, heavy in areas of poor soil drainage. Incursions of moderately low volume, mixed-species, multi-canopy areas with < 50% canopy closure. | | | |
| Logging/Transportation | Field Review: T. Wetzel/G. Slawson, 7/13/93 | Office Review: J. Doyal | |
| Unit is accessed by Road #71-80-24.1. Recommend swing yarding entire unit. Partial suspension can be achieved on most of the steep slopes. Partial cut is feasible on gentle slopes to west of road. A 100 foot (or greater) stream buffer is on the west and south boundaries. The Class II stream buffers within the unit are not flagged. Fair economics. | | | |
| Watershed/Fisheries | Field Review: B. Romey, 7/3/93 | Office Review: T. Stewart | |
| Streams west and northwest of unit need 100' buffers. Stream south of unit as laid out needs to be split yarded or full suspension. Cut from slope break. | | | |
| Soils/Geology | Field Review: M. Minnillo, 7/03/93 | Office Review: T. Stewart | |
| Attain partial suspension where possible in northern half of unit due to numerous seeps, windthrows and steep slopes. | | | |
| Wildlife | Field Review: M. Minnillo, 7/03/93 | Office Review: R. Fairbanks | |
| High use riparian corridor by bear, deer, and wolves evidenced by tracks, scat, and scattered wolf-killed deer. Good cover, bedding habitat in lower north end of unit. Snags to be maintained in stream buffer. Moderate deer use in unit. Much dead and downed material throughout unit. Structure will be maintained in Class II stream buffer on west side of unit. Retain Level 1 structure. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit not seen from any priority travel route or use area. Seen from West Coast Waterway in middleground. Maximum Modification VQO. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Maintain 100' buffers on Class I and II streams west and northwest of unit. Class III stream to south is now unit boundary. Harvest only to slope break. Achieve partial suspension. Windthrow concerns limit use of partial cutting. Type A clearcut. Mitigation measures for this unit are: F5, F6, F7, F8, and W5. | | | |

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

VCU : 594

UNIT : 417

QUAD : C4-NE



- Revised Control Lake Project Boundary
- Post-Field Unit Boundary w/ Setting Codes
- Other Post-Field Unit Boundaries
- USFS Timber Types for Volc 4-7
- Eagle Tree Buffer of 330ft
- Existing & Rebuilt Roads
- F.S. Roads Under Construction
- Post-Field Proposed Roads
- Ahmu-Class 1 & Stream Chantypes
- Ahmu-Class 2 & Stream Chantypes
- Ahmu-Class 3 & Stream Chantypes
- Channel Type Change

- Lakes and Ponds
- Second Growth Units
- MMI 4
- McGilvery > 41
- Landings
- Stream & Lake NoCUT Buffers

June 09, 1994

.5 MILE

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

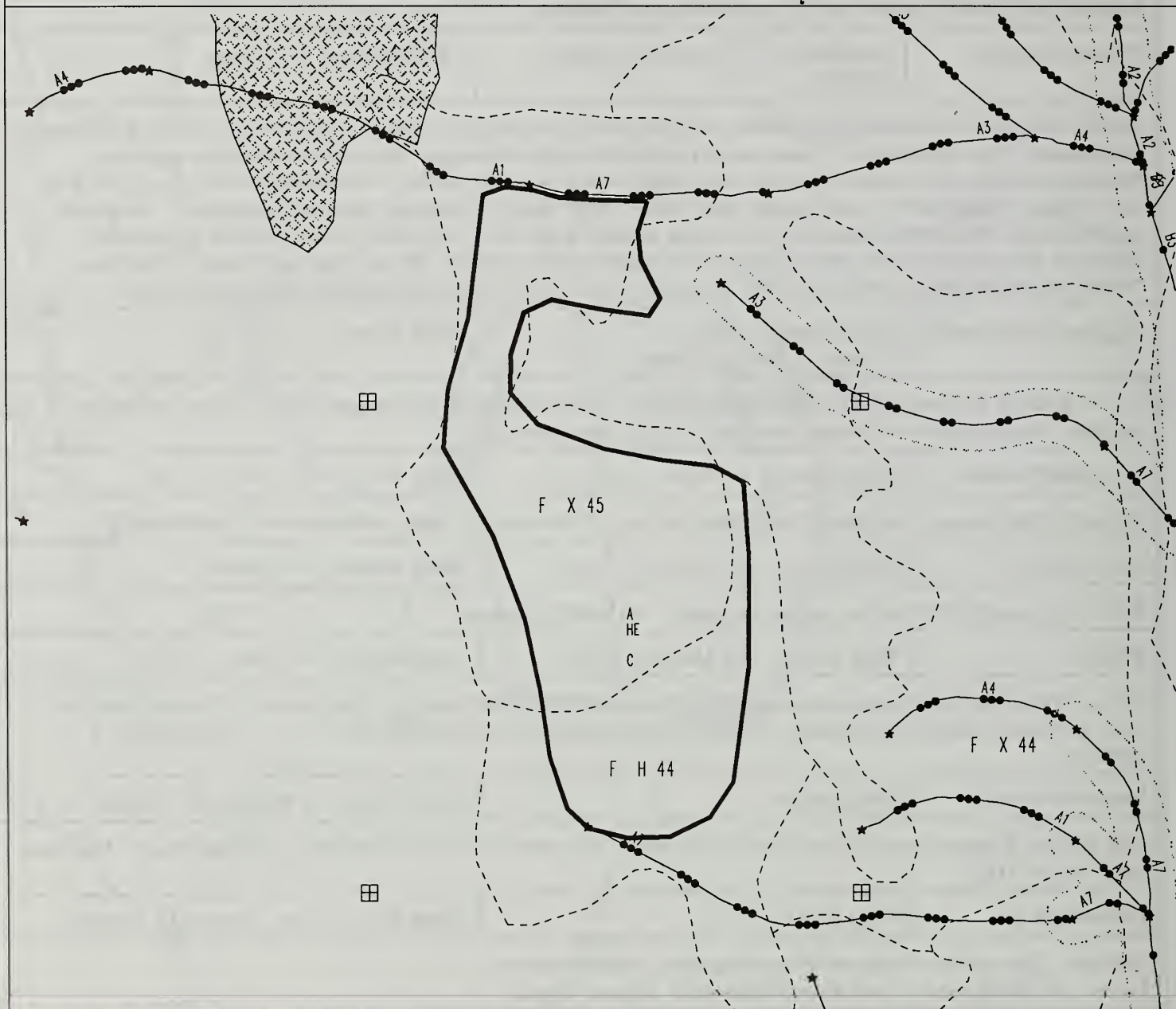
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|--|--|---|---------------------------|
| VCU #: 594 | UNIT #: 417 | QUARTER QUAD: C4NE | PHOTO YR/#: 1991/1190-131 |
| ACRES: 55.5 | VOL.: 1028 MBF | LOGGING SYSTEM: Live Skyline | |
| LANDSCAPE ZONE: Unit is in the Kogish Mountain Corridor. | | | |
| Timber/Vegetation | Field Review: B. Hasebe/J. Goering, 7/13/93 | Office Review: J. Goering | |
| Species composition predominantly hemlock and cedar with some lodgepole present. Predominantly hemlock and cedar regeneration. Poor regeneration in many areas possibly due to snow damage. Very dense understory vegetation. Numerous muskegs are located around the unit. High amount of Alaska yellow cedar decline evident throughout area. Low volume, mixed-species, multi-canopy stand with < 50% canopy closure and low site productivity. Lodgepole significant near the southeast boundary and in other pockets in the unit. Very dense cedar advanced regeneration (candidate for release) in some areas. Analyze for feasibility given the low site index and low volume of the stand. Otherwise consider partial retention harvest to promote regenerative success and desirable species composition. | | | |
| Logging/Transportation | Field Review: J. Doyal/J. Graves, 7/14/93 | Office Review: E. Urstadt | |
| Unit is accessed by Road #71-81-7. Recommend using a 70 foot tower using a shotgun system. Partial suspension is not possible. Some tailholds will require tie-backs. Fair to poor economics. | | | |
| Watershed/Fisheries | Field Review: B. Romey, 7/3/93 | Office Review: T. Stewart | |
| No timber near stream. Unit has as many snags as trees. Full suspend or split yard stream with directional fall. | | | |
| Soils/Geology | Field Review: M. Minnillo, 7/03/93 | Office Review: T. Stewart | |
| Slopes are generally 40% or less; some are greater. No stability concerns. | | | |
| Wildlife | Field Review: M. Minnillo, 7/3/93 | Office Review: M. Hall | |
| No concerns as the neighboring habitat consists of the same low volume, scrubby cover as unit. Moderate deer use in unit. J. Goering observed pine marten on northeast unit boundary in scrub habitat (VC3) - 7/17. Retain Level 1 structure. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit not seen from any priority travel route or use area. Seen from West Coast Waterway in Middleground. Maximum Modification VQO. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Directional fall and split yard Class III stream in east part of unit. Type I group selection due to regeneration concerns and limited patches of merchantable timber. Several acres of noncommercial land in settings B and C will be yarded over but not harvested. Mitigation measures for this unit are: F6, F8, and W2. | | | |

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

VCU : 594

UNIT : 418

QUAD : C4-NE



- Revised Control Lake Project Boundary
- Post-Field Unit Boundary w/ Setting Codes
- Other Post-Field Unit Boundaries
- USFS Timber Types for Volc 4-7
- Eagle Tree Buffer of 330ft
- Existing & Rebuilt Roads
- F.S. Roads Under Construction
- Post-Field Proposed Roads
- Ahmu-Class 1 & Stream Chantypes
- Ahmu-Class 2 & Stream Chantypes
- Ahmu-Class 3 & Stream Chantypes
- Channel Type Change

- Lakes and Ponds
- Second Growth Units
- MMI 4
- McGilvery > 41
- Landings
- Stream & Lake NoCUT Buffers

May 16, 1994

.5 MILE

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

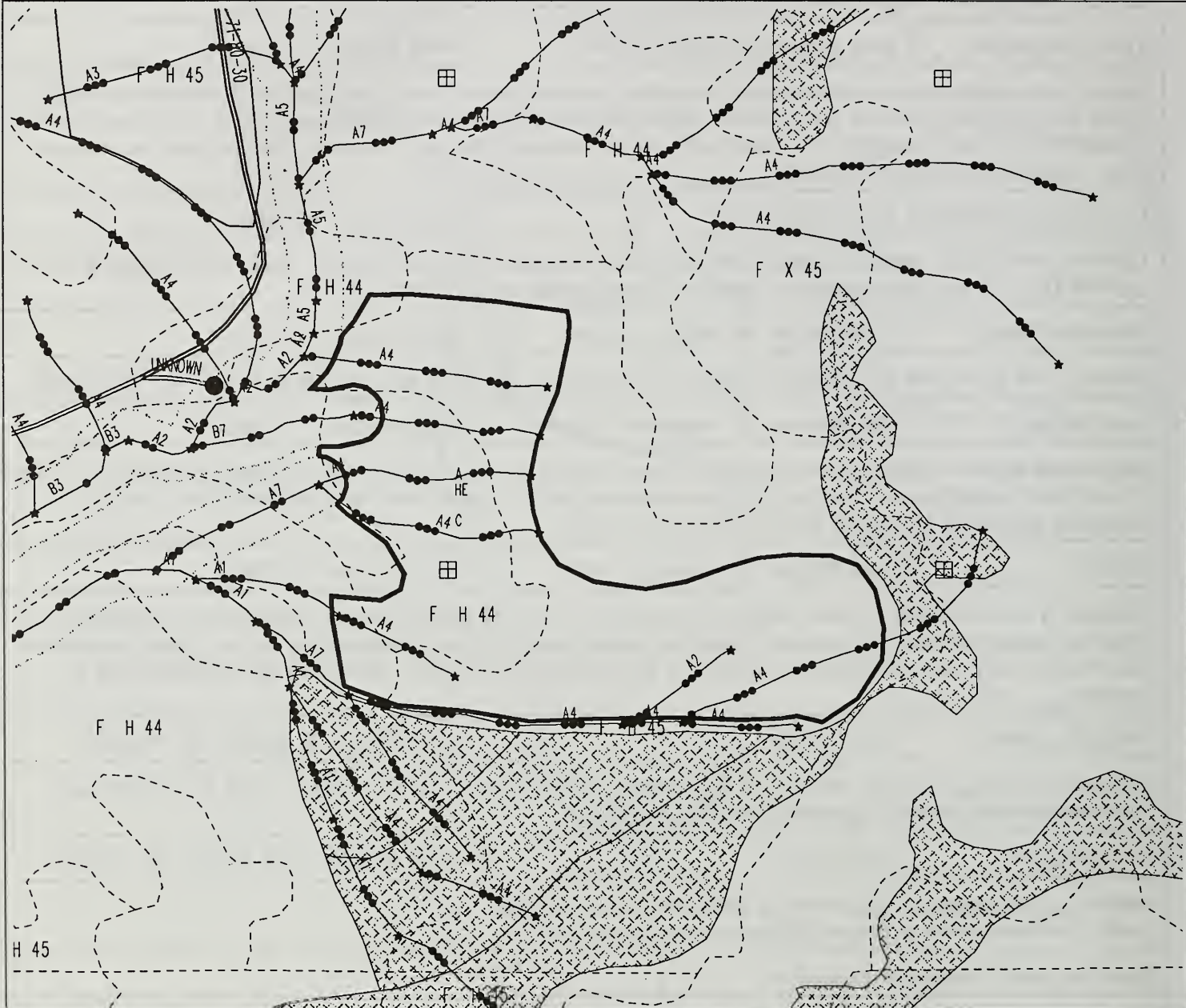
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|--|------------------------------------|---|--------------------------|
| VCU #: 594 | UNIT #: 418 | QUARTER QUAD: C4NE | PHOTO YR/#: 1972/1290-17 |
| ACRES: 42.6 | VOL.: 977.8 MBF | LOGGING SYSTEM: Helicopter | |
| LANDSCAPE ZONE: Unit is north of Big Salt Lake, but outside the Kogish Mountain Corridor. | | | |
| Timber/Vegetation | Field Review: M. Case, 7/20/93 | Office Review: J. Goering | |
| Species composition predominantly hemlock but includes some spruce and cedar. Regeneration predominantly hemlock with a few spruce but is lacking cedar overall. Moderately low volume, multi-canopy stand with < 50% canopy closure & relatively low site productivity in southeast half. Rocky, relatively thin soils, exposed rock, and poor soil drainage areas. Steep slope in the northern half. | | | |
| Logging/Transportation | Field Review: none | Office Review: K. Jehnke | |
| Unit was not visited by engineers because soils specialists recommend helicopter logging. Yard unit to landing 4 + 31 in unit 594-417. Average flight distance = 4600 feet; average flight slope = -4%. | | | |
| Watershed/Fisheries | Field Review: R. Romey, 7/05/93 | Office Review: T. Stewart | |
| Streams 1 and 2 are Class III. Stream 2 needs to be split yarded. Streams 1 and 3 should be felled away from stream. | | | |
| Soils/Geology | Field Review: M. Minnillo, 7/05/93 | Office Review: T. Stewart | |
| Recommend helicopter logging due to steep, wet slopes. Helicopter logging would also eliminate approximately 1.5 miles of road which would have to cross the V-Notch on the north end of unit and then cut across 90% slopes. High probability that a road in this area would wash out and/or slide. | | | |
| Wildlife | Field Review: M. Minnillo, 7/05/93 | Office Review: M. Hall | |
| This area is heavily traveled by deer and bear moving between low and high elevations. Goshawk or cooper hawk observed circling over unit. Recommend conducting goshawk survey prior to implementing action. Delete the northern end of unit in order to retain a high use corridor on the south side of V-Notch. This would also maintain Level 1 structure. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit not seen from any priority travel route or use area. Unit visible from Klawock airport. Seen from West Coast Waterway in Middleground. Maximum Modification VQO. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Streams are not in unit. Directional fall where along boundary. Conduct goshawk survey prior to implementation. Type C helicopter. Mitigation measures for this unit are: F2, F6, W3, and W9. | | | |

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

VCU : 594

UNIT : 419

QUAD : C4-NE



- Revised Control Lake Project Boundary
- Post-Field Unit Boundary w/ Setting Codes
- Other Post-Field Unit Boundaries
- USFS Timber Types for Volc 4-7
- Eagle Tree Buffer of 330ft
- Existing & Rebuilt Roads
- F.S. Roads Under Construction
- Post-Field Proposed Roads
- Ahmu-Class 1 & Stream Chantypes
- Ahmu-Class 2 & Stream Chantypes
- Ahmu-Class 3 & Stream Chantypes
- Channel Type Change

- Lakes and Ponds
- Second Growth Units
- MMI 4
- McGilvery > 41
- Landings
- Stream & Lake NoCUT Buffers

.5 MILE

May 16, 1994

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

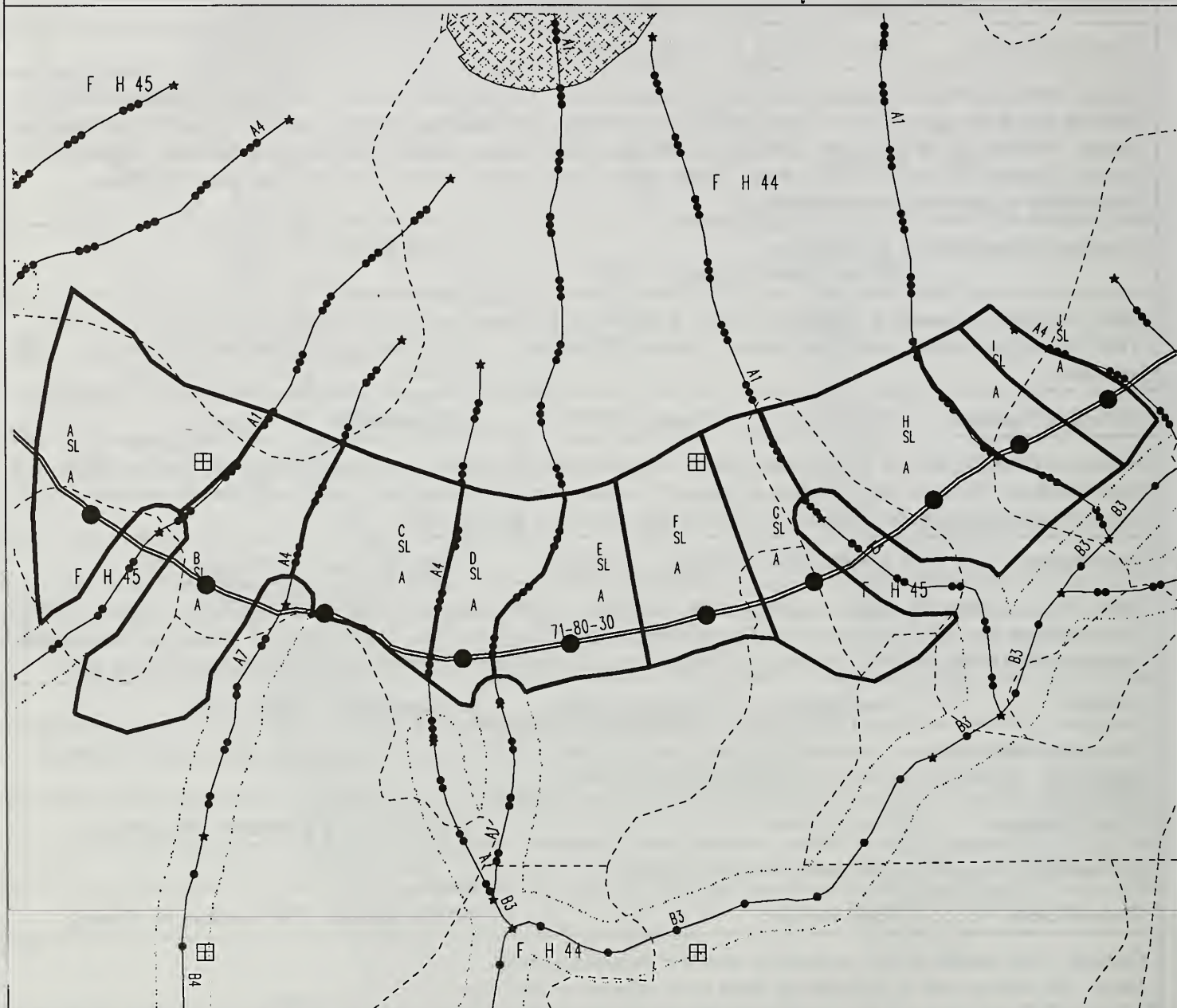
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|---|---|---|--------------------------|
| VCU #: 594 | UNIT #: 419 | QUARTER QUAD: C4NE | PHOTO YR/#: 1991/1290-17 |
| ACRES: 47.8 | VOL.: 2116.3 MBF | LOGGING SYSTEM: Helicopter | |
| LANDSCAPE ZONE: Unit is north of Big Salt Lake, but outside the Kogish Mountain Corridor. | | | |
| Timber/Vegetation | Field Review: B. Hasebe, 7/15/93 | Office Review: J. Goering | |
| Species composition predominantly hemlock with some spruce. Few cedar are present. Regeneration predominantly hemlock with a few spruce but is lacking cedar. Low amount of regeneration overall. Little to no mistletoe evident in canopy. Rock bluffs on the higher elevations of the unit. Steep slopes, shallow soils overlying bedrock. High erosive potential in Class III stream V-notch areas. Many small seeps, streams, and poor soil drainage areas. Promote spruce/cedar regeneration through planting. | | | |
| Logging/Transportation | Field Review: E. DeWilde/D. Keister, 7/15/93 | Office Review: J. Doyal | |
| Unit could not be accessed at maximum grades. Recommend helicopter logging to landing 139+02 in Unit 594-420. Verify landing suitability during final layout. Average flight slope = -18%. Average flight distance = 3600 feet. Fair economics. | | | |
| Watershed/Fisheries | Field Review: J. Metzler, 7/03/93 | Office Review: T. Stewart | |
| Numerous Class III streams flow through unit. These are typically incised on the steeper slopes and poorly defined on small benches. However, they all show evidence of transporting large amounts of gravel to cobble-size material and should be split yarded to avoid disrupting the drainage pattern on this wet slope. | | | |
| Soils/Geology | Field Review: J. Metzler, 7/03/93 | Office Review: T. Stewart | |
| There is a large (natural) shallow landslide north of the unit. Bluffs with very shallow soils occur above approx. 1,400' in the northern part of the unit and should be excluded. Slopes are steep, wet, and hummocky. Achieve at least partial suspension due to high MMI. The area south of Stream 6 is very high MMI and should be excluded from the unit. | | | |
| Wildlife | Field Review: S. Tanguay, 7/03/93 | Office Review: R. Fairbanks | |
| Nice unharvested drainage, much deer and bear sign. Moderate deer/bear use. Stay below 1,400' to 1,200' to avoid high bluffs. Retain Level 1 structure; contiguous old-growth. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit not seen from any priority travel route or use area. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Bluffs and MMI4 to south excluded from unit. Suspension achieved with helicopter logging. Type C clearcut. Mitigation measures for this unit are: F1, F2, F3, F5, F6, and W3. | | | |

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

VCU : 594

UNIT : 420

QUAD : C4-NE



- Revised Control Lake Project Boundary
- Post-Field Unit Boundary w/ Setting Codes
- Other Post-Field Unit Boundaries
- USFS Timber Types for Volc 4-7
- Eagle Tree Buffer of 330ft
- Existing & Rebuilt Roads
- F.S. Roads Under Construction
- Post-Field Proposed Roads
- Ahmu-Class 1 & Stream Chantypes
- Ahmu-Class 2 & Stream Chantypes
- Ahmu-Class 3 & Stream Chantypes
- Channel Type Change

- Lakes and Ponds
- Second Growth Units
- MMI 4
- McGilvery > 41
- Landings
- Stream & Lake NoCUT Buffers

May 16, 1994

.5 MILE

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

| | | | |
|--|---|--|---------------------------|
| VCU #: 594 | UNIT #: 420 | QUARTER QUAD: C4NE | PHOTO YR/#: 1971/1072-213 |
| ACRES: 91.0 | VOL.: 3047.4 MBF | LOGGING SYSTEM: Slackline with 70' Tower | |
| LANDSCAPE ZONE: Unit is north of Big Salt Lake, but outside the Kogish Mountain Corridor. | | | |
| Timber/Vegetation | Field Review: B. Hasebe, 7/14/93 | Office Review: J. Goering | |
| Species composition predominantly hemlock and cedar. Few spruce are present. Regeneration predominantly hemlock with a few spruce but is lacking cedar. Fairly dense understory vegetation. Presently lacking regeneration overall due to closed canopy. Alaska yellow cedar decline evident. Steep slopes, shallow soils overlying bedrock. Numerous V-notches intersecting unit. Little to no mistletoe evident in canopy. Promote spruce/cedar regeneration through planting. | | | |
| Logging/Transportation | Field Review: E. Dewilde/D. Keister, 7/13/93 | Office Review: E. Urstadt | |
| Unit is accessed by Road #71-80-30. A 70 foot tower with slackline capability is recommended. Partial suspension can be achieved. The south-central finger should be excluded due to poor timber. The north boundary has been placed below bluffs. The SE boundary has a 100 foot stream buffer. | | | |
| Watershed/Fisheries | Field Review: B. Romey, 7/13/93 | Office Review: T. Stewart | |
| All streams should be split yarded or receive full suspension except stream south of unit which needs a 100' buffer. Many debris chutes. Logjam on Class I stream forms a potentially complete barrier to anadromous fish. Easy removal potential. Good habitat upstream. | | | |
| Soils/Geology | Field Review: M. Minnillo, 7/05/93 | Office Review: T. Stewart | |
| Partial suspension required due to steep, wet, unstable slopes. Split yard four major V-Notches within unit (see map). | | | |
| Wildlife | Field Review: M. Minnillo, 7/05/93 | Office Review: M. Hall | |
| Leave a travel corridor in center of unit where proposed unit boundary is narrowest (see map). Windthrow does not seem to be a problem in this area. High use deer forage/cover area along top and bottom of unit. Corridor would allow ease of travel between low elevation riparian and high elevation alpine. Contiguous old-growth; retain Level 1 structure. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit not seen from any priority travel route or use area. Seen from West Coast Waterway in middleground. Maximum Modification VQO. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Directional fall and split yard Class III streams. Leave strip on Class II stream - 100' on each side. Leave windfirm trees. Type A clearcut in remainder of unit. Possible splityarding problems in settings B, C, and D. Setting added in office and setting A boundary moved east to stream. Logjam on Class I stream to southeast of unit has easy removal potential and good habitat upstream. Mitigation measures for this unit are: F1, F3, F5, F6, F8, and W5. | | | |

NO UNIT MAP

UNIT DROPPED OR DEFERRED

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

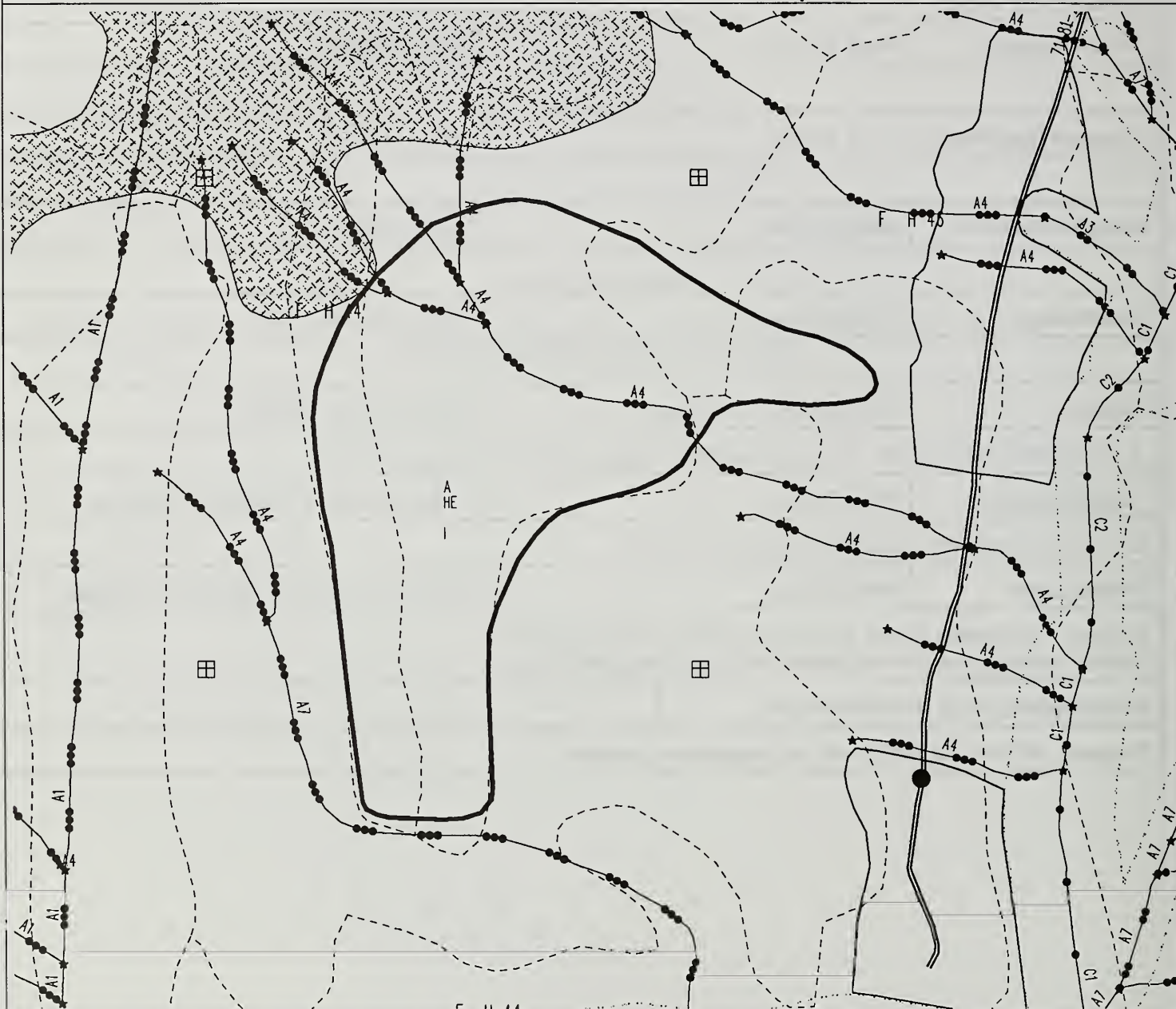
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|---|--------------------------|---|-------------------------|
| VCU #: 595 | UNIT #: 401 | QUARTER QUAD: | PHOTO YR/#: 1991/990-41 |
| ACRES: | VOL.: | LOGGING SYSTEM: | |
| LANDSCAPE ZONE: | | | |
| Timber/Vegetation | Field Review: | Office Review: | |
| | | | |
| Logging/Transportation | Field Review: | Office Review: | |
| | | | |
| Watershed/Fisheries | Field Review: | Office Review: | |
| | | | |
| Soils/Geology | Field Review: | Office Review: | |
| | | | |
| Wildlife | Field Review: S. Tanguay | Office Review: M. Hall | |
| Low bear/deer sign evident. No special wildlife concerns. Level 1 structure retention. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit not seen from any priority travel route or use area. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Dropped. 80% of unit MMI4 soils and regeneration concerns. | | | |

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

VCU : 595

UNIT : 402

QUAD : C3-NW



- Revised Control Lake Project Boundary
- Post-Field Unit Boundary w/ Setting Codes
- Other Post-Field Unit Boundaries
- USFS Timber Types for Volc 4-7
- Eagle Tree Buffer of 330ft
- Existing & Rebuilt Roads
- F.S. Roads Under Construction
- Post-Field Proposed Roads
- Ahmu-Class 1 & Stream Chantypes
- Ahmu-Class 2 & Stream Chantypes
- Ahmu-Class 3 & Stream Chantypes
- Channel Type Change

- Lakes and Ponds
- Second Growth Units
- MMI 4
- McGilvery > 41
- Landings
- Stream & Lake NoCUT Buffers

.5 MILE

May 16, 1994

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

| | | | |
|---|--|---|--------------------------|
| VCU #: 595 | UNIT #: 402 | QUARTER QUAD: C3NW | PHOTO YR/#: 1991/1990-37 |
| ACRES: 60.6 | VOL.: 1256.4 MBF | LOGGING SYSTEM: Helicopter | |
| LANDSCAPE ZONE: Unit is within the Ball's Lake Corridor. | | | |
| Timber/Vegetation | Field Review: M. Case, 7/2/93 | Office Review: J. Goering | |
| Species composition predominantly hemlock but includes cedar and some spruce. Regeneration predominantly hemlock but includes some cedar and spruce. Windthrow damage evident throughout the unit. Generally steep slopes. Low volume, mixed-species, multi-canopy stand with < 50% canopy closure in the northeastern portion. Fairly dense understory vegetation. | | | |
| Logging/Transportation | Field Review: M. Whitty/J. Graves, 7/07/93 | Office Review: C. Barnhart | |
| Road was attempted, however, poor grades, difficult construction and poor landing locations led to the dropping of the road. The scattered nature of the timber and poor road feasibility led us to recommend helicopter yarding to a landing on Road 71-82-24 in Unit 595-403. Average flight slope is 22% downhill; average flight path is 4500 feet. | | | |
| Watershed/Fisheries | Field Review: S. Tanguay, 6/28/93 | Office Review: T. Stewart | |
| Four highly incised channels at northwest of unit need full suspension. These merge into one stream flowing northwest to southeast through middle of unit. Helicopter logging suggested above 120'. Channels have high sediment load and begin to braid at footslope. If boundary is brought to Class III stream to south, directionally fall away from (north) of stream channel. | | | |
| Soils/Geology | Field Review: M. Minnillo, 6/28/93 | Office Review: T. Stewart | |
| Recommend helicopter logging above 1,200' due to steep, wet slopes. Recommend partial suspension in northern portion of unit to help reduce disturbance to series of braided Class III channels. | | | |
| Wildlife | Field Review: M. Minnillo, 6/28/93 | Office Review: R. Fairbanks | |
| Selectively harvest with helicopter the northern portion of unit (above 1,200') taking everything bigger than 15" DBH. Leave as many snags as are feasible. High deer use. Murrelet dawn survey conducted - presence confirmed. Woodpecker heard. Muskeg along east boundary. Retain Level 2 structure due to surrounding naturally fragmented matrix. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit is not visible from any priority travel routes or use areas. Maximum Modification VQO. Seen from Big Salt Lake in Middleground. Scenic Viewshed LUD. Partial Retention VQO. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Recommend Type I group selection due to clumped nature of larger trees and windthrow potential in this lower volume stand where structure is desired. Helicopter log because of infeasible road cable systems unsuited for the topography, number of split yard streams, and need for suspension. Split yard streams. Maintain full suspension adjacent to Class III braided streams in north end of unit. Mitigation measures for this unit are F6 and W2. | | | |

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

VCU : 595

UNIT : 403

QUAD : C3-NW



- Revised Control Lake Project Boundary
- Post-Field Unit Boundary w/ Setting Codes
- Other Post-Field Unit Boundaries
- USFS Timber Types for Volc 4-7
- Eagle Tree Buffer of 330ft
- Existing & Rebuilt Roads
- F.S. Roads Under Construction
- Post-Field Proposed Roads
- Ahmu-Class 1 & Stream Chantypes
- Ahmu-Class 2 & Stream Chantypes
- Ahmu-Class 3 & Stream Chantypes
- Channel Type Change

- Lakes and Ponds
- Second Growth Units
- MMI 4
- McGilvery > 41
- Landings
- Stream & Lake NoCUT Buffers

May 16, 1994

.5 MILE

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

| | | | |
|--|---|---|-------------------------|
| VCU #: 595 | UNIT #: 403 | QUARTER QUAD: C3NW | PHOTO YR/#: 1991/990-38 |
| ACRES: 22.6 | VOL.: 995.7 MBF | LOGGING SYSTEM: Swingyarder/Running Skyline | |
| LANDSCAPE ZONE: Unit is within the Ball's Lake Corridor. | | | |
| Timber/Vegetation | Field Review: G. Hedin, 7/1/93 | Office Review: M. Whitty | |
| Species composition predominantly hemlock with some cedar. Few spruce are present. Predominantly hemlock regeneration. Some thin soil, extensive poor soil drainage areas. Promote spruce/cedar regeneration through planting. | | | |
| Logging/Transportation | Field Review: M. Whitty/J. Graves, 7/02/93 | Office Review: K. Jehnke | |
| Unit is accessed by Road 71-81-24. This road goes into a TTRA buffered area in order to access the unit. Unit could be logged with better overall suspension from two landings with a large tower, however, the number of split yard streams and lack of adequate tailholds requires a smaller swing yarder. Difficult falling because of split yarding in north end of unit. Either reclassify one of the streams as nonsplit yard or drop. Average unit slope = 40%. Swing yarder will need slack pulling capacity to split yard creeks. Sixty percent uphill. About 80% of the unit will have partial suspension. Tailholds will be required in the 200 foot buffer. Partial cutting is feasible with a MSP carriage. | | | |
| Watershed/Fisheries | Field Review: E. Ablow, 6/29/93 | Office Review: T. Stewart | |
| Eastern boundary of unit is bounded by a Class I, C1, 200' buffered stream. Three streams flow east into the Class I stream and are low gradient on the eastern edge of the unit. Stream 1 (A3-A4 channel flowing through the northern portion of the unit) and Stream 3 (A3-A4 channel flowing through the center of the unit) require 100' buffers as they enter the flood plain. Up the side slope of the unit they change to Class III and only require split yarding. Stream 4 (A4 channel flowing through the unit south of Stream 3) and Streams 2, 1b, and 1a (all three A4 channels flow into Stream 1) are all Class III streams that require split yarding. | | | |
| Soils/Geology | Field Review: J. Metzler, 8/13/93 | Office Review: T. Stewart | |
| Unit is very wet and soil creep is occurring on the moderately steep slopes. Achieve at least partial suspension due to high MMI. | | | |
| Wildlife | Field Review: H. Sloan, 6/29/93 | Office Review: R. Fairbanks | |
| No concerns. Retain level 1 snag retention. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit not seen from any priority travel route or use area. Seen Road 30 in Foreground. Maximum Modification VQO. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Class I stream on east boundary requires 200' buffer where channel type is C1 and 100' buffer where channel type is C2. Lower portions of Class III streams become Class I and require 100' buffers. Class III streams in unit require split yarding. Recommend Type F seed tree cut to maintain structure in this relatively windfirm stand. Partial suspension was requested for unit after layout. Partial suspension only possible on approximately 80% of unit. Final design may need to alter boundary or logging configuration. Mitigation measures for this unit are: F3, F5, F6, F8, and W2. | | | |

NO UNIT MAP
UNIT DROPPED OR DEFERRED

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

| | | | |
|---|---------------------------------|---|-------------------------|
| VCU #: 595 | UNIT #: 404 | QUARTER QUAD: C3NW | PHOTO YR/#: 1991/990-38 |
| ACRES: | VOL.: | LOGGING SYSTEM: | |
| LANDSCAPE ZONE: | | | |
| Timber/Vegetation | Field Review: | Office Review: | |
| Logging/Transportation | Field Review: | Office Review: J. Doyal | |
| This unit was dropped due to inadequate area and low economic feasibility. | | | |
| Watershed/Fisheries | Field Review: E. Ablow, 6/29/93 | Office Review: | |
| <p>The unit is encircled by Class I streams requiring at least 100' buffers. Stream 1 is a B4 channel that flows along the western side of the unit. It requires a 100 foot buffer plus a 50' selective harvest. Stream 2 is a Class I, C1 channel that has many braids and alcoves cutting into the southern tip of the unit and flows around the southern half of the unit. This stream requires 200' buffer. The buffer should be measured from the outer most flood channels. Stream 3 is a Class I, B5 channel that requires a 100' buffer plus a 50' selective cut buffer. A muskeg channel with coho fry cuts the unit in half. The unit is 17 acres without the required buffers. It seems with all the stream concerns the unit should be dropped.</p> | | | |
| Soils/Geology | Field Review: E. Ablow, 6/29/93 | Office Review: | |
| The southern tip of the unit is made up of riparian soils - lots of braids and dense vegetation. The center of the unit has no concerns. | | | |
| Wildlife | Field Review: H. Sloan, 6/29/93 | Office Review: M. Hall | |
| <p>Lots of beaver sign in wetlands surrounding unit (dams, chewing, and prints). High bear sign; light to moderate deer sign. Murrelet survey - occupancy confirmed. Murrelet circling over stand. Goshawk survey - no detections. Level 1 structure retention; contiguous old-growth. Recommend dropping unit due to wildlife concerns.</p> | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit not seen from any priority travel route or use area. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| <p>Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit.</p> | | | |
| Interdisciplinary Team Recommendations | | | |
| Deferred due to less than 5 acres of CFL. | | | |

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

VCU : 595

UNIT : 405

QUAD : C3-NW



- Revised Control Lake Project Boundary
- Post-Field Unit Boundary w/ Setting Codes
- Other Post-Field Unit Boundaries
- USFS Timber Types for Volc 4-7
- Eagle Tree Buffer of 330ft
- Existing & Rebuilt Roads
- F.S. Roads Under Construction
- Post-Field Proposed Roads
- Ahmu-Class 1 & Stream Chantypes
- Ahmu-Class 2 & Stream Chantypes
- Ahmu-Class 3 & Stream Chantypes
- Channel Type Change

- Lakes and Ponds
- Second Growth Units
- MMI 4
- McGilvery > 41
- Landings
- Stream & Lake NoCUT Buffers

May 16, 1994

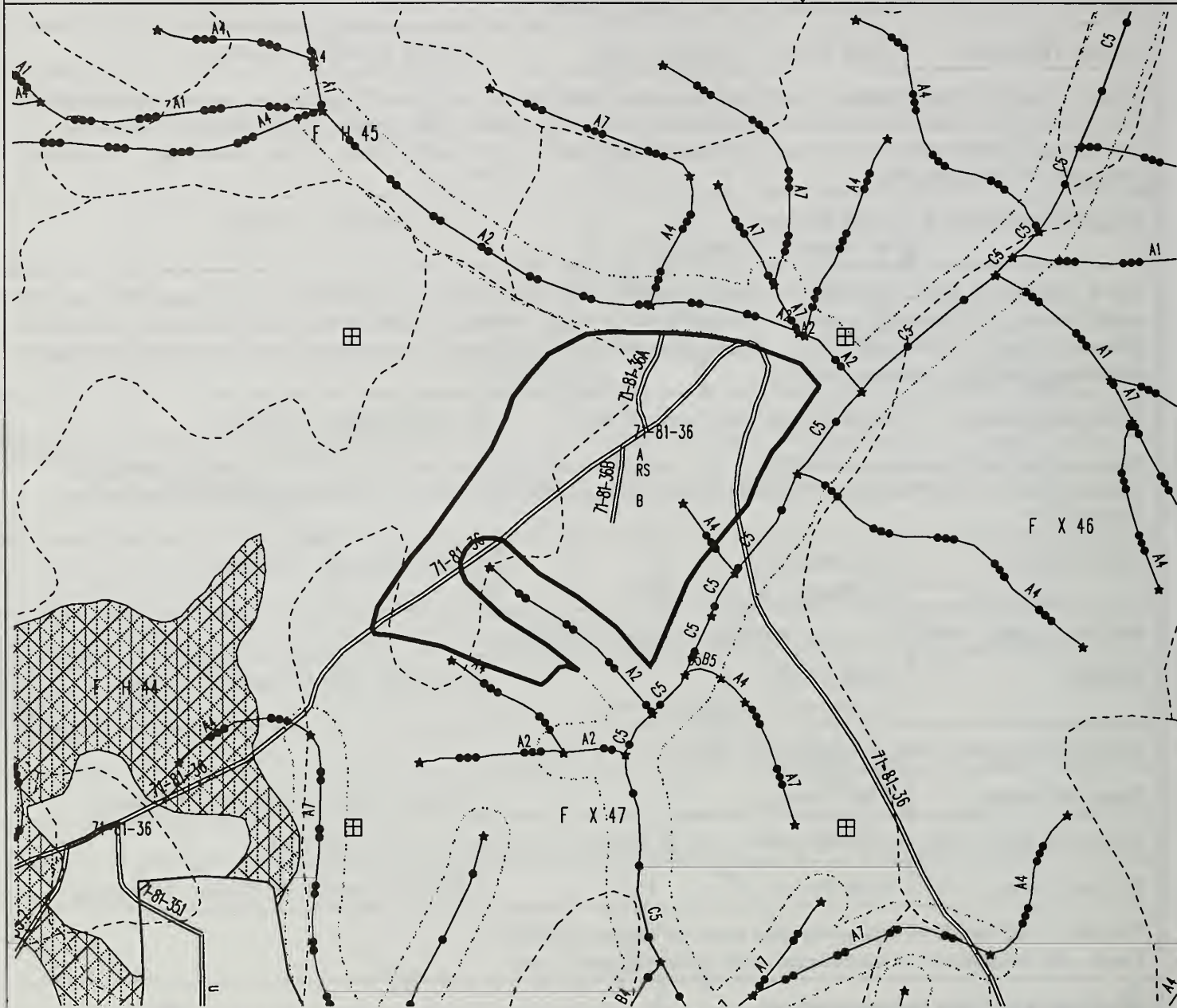
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CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

| | | | |
|---|---|---|-------------------------|
| VCU #: 595 | UNIT #: 405 | QUARTER QUAD: C3NW | PHOTO YR/#: 1991/990-37 |
| ACRES: 14.2 | VOL.: 245.2 MBF | LOGGING SYSTEM: Swingyarder/Running Skyline | |
| LANDSCAPE ZONE: Unit is within the Ball's Lake Corridor. | | | |
| Timber/Vegetation | Field Review: J. Miller, 7/1/93 | Office Review: J. Goering | |
| Species composition predominantly hemlock but includes some spruce and cedar. Regeneration predominantly hemlock but includes a few cedar and spruce in the northern half. Alaska yellow cedar decline evident and prominent in the western half. Moderately low volume, multi-canopy stand with < 50% canopy closure in the western half. Some thin soil, poor soil drainage areas. | | | |
| Logging/Transportation | Field Review: M. Whitty/J. Graves, 7/07/93 | Office Review: J. Doyal/ | |
| Use a swingyarder with a high lead or running skyline system. Maximum yarding distance is plus/minus 500' with 75% uphill yarding; 25% downhill yarding. There is 2,200' of Class I buffers. Tailholds will be in the buffers. Blowdown potential is high - no mitigation given. Existing blowdown in unit. Partial cut is possible, but not recommended due to blowdown potential. Economics are fair. | | | |
| Watershed/Fisheries | Field Review: B. Rogers, 6/29/93 | Office Review: T. Stewart | |
| Stream along south boundary needs 100' buffer. Stream to east needs 100' buffer plus 100' for portion having C1 channel type (only 100' buffer for C5 channel type). Stream to north needs to be directional/fall away from stream, flagged O/W. | | | |
| Soils/Geology | Field Review: H. Sloan/C. Confer, 6/26/93 | Office Review: T. Stewart | |
| Moderate slopes. Small slide on east boundary excluded from 1 unit. | | | |
| Wildlife | Field Review: H. Sloan/C. Confer, 6/26/93 | Office Review: M. Hall | |
| No wildlife concerns. Heard woodpecker. Retain Level 1 structure. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit is not visible from any priority travel routes or use areas. Maximum Modification VQO. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Class II stream at south boundary requires 100' buffer. Class I stream on east side requires 200' buffer. Class III stream at north end requires directional falling. Recommend Type B clearcut because of blowdown potential. Directionally fall trees away from small slide on east side. Mitigation measures for this unit are: F5, F6, F8, and W4. | | | |

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

QUAD : C3-NW



- | | | | |
|--|---|--|-----------------------------|
| | Revised Control Lake Project Boundary | | Lakes and Ponds |
| | Post-Field Unit Boundary w/ Setting Codes | | Second Growth Units |
| | Other Post-Field Unit Boundaries | | MMI 4 |
| | USFS Timber Types for Volc 4-7 | | McGilvery > 41 |
| | Eagle Tree Buffer of 330ft | | Landings |
| | Existing & Rebuilt Roads | | Stream & Lake NoCUT Buffers |
| | F.S. Roads Under Construction | | |
| | Post-Field Proposed Roads | | |
| | Ahmu-Class 1 & Stream Chantypes | | |
| | Ahmu-Class 2 & Stream Chantypes | | |
| | Ahmu-Class 3 & Stream Chantypes | | |
| | Channel Type Change | | |

.5 MILE

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

| | | | |
|---|---|---|-------------------------|
| VCU #: 595 | UNIT #: 406 | QUARTER QUAD: C3NW | PHOTO YR/#: 1991/990-36 |
| ACRES: 31.2 | VOL.: 1266.1 MBF | LOGGING SYSTEM: Swingyarder/Running Skyline | |
| LANDSCAPE ZONE: Unit is just south of Ball's Lake. | | | |
| Timber/Vegetation | Field Review: M. Case/S. Karstens, 7/6/93 | Office Review: J. Goering | |
| Species composition predominantly hemlock with some cedar. Few spruce are present and concentrated in creek areas. Predominantly hemlock regeneration. Heavy amount of mistletoe infection evident in canopy. Low to moderate amounts of stem decay (pini) evident in hemlock and cedar. Low volume, mixed-species, multi-canopy stand with < 50% canopy closure in the western portion. Some thin soil areas. Promote spruce/cedar regeneration through planting. | | | |
| Logging/Transportation | Field Review: E. Urstadt/J. Spolar/D. Keister, 7/01/93 | Office Review: K. Jehnke | |
| Road #71-81-36 provides the main access to the unit. With two spurs wood can be swing yarded to roads and landings. A 70 foot tower will be needed at the landing at 0+00R, 71-81-36B to provide full suspension over the split yard creek to the south. If a swing yarder was used the boundary would have to be modified to exclude the area south of this stream. Partial suspension will be available over most of the unit. | | | |
| Watershed/Fisheries | Field Review: E. Ablow, 6/30/93 | Office Review: T. Stewart | |
| Stream 1, south on east side of unit (C5 channel) requires a 100' buffer from the top of the slope. There are side channels and alcoves covered by dense vegetation. Coho fry and trout were found throughout. Stream draining southeast portion (A2) and north boundary stream (A2) flow into southeast boundary stream from the northwest. They are both Class II streams flowing directly into a Class I stream. Dolly varden were seen in both at their mouths. They require 100' buffers. Stream 3 also flows into the western side of stream 1. The first 600' is a Class II, A2 stream that requires 100 foot buffer. Above 600' there is a 4' bedrock control velocity fish barrier that forks into two Class III stream channels. Streams 4 and 5 are both Class III streams that flow from the eastern side of Stream 1. They both require split yarding away from channel. | | | |
| Soils/Geology | Field Review: E. Ablow, 6/30/93 | Office Review: T. Stewart | |
| The northeastern portion of the unit on the eastern side of the stream that runs southeast is less stable. There is a recent slide northeast of the north boundary stream. The northeast side of the unit should not be logged above 310' elevation because of instability. The rest of the unit has no concerns. | | | |
| Wildlife | Field Review: H. Sloan, 6/30/93 | Office Review: R. Fairbanks | |
| No concerns. Level 2 snag retention due to adjacency to large naturally fragmented area. Goshawk and murrelet surveys performed. No goshawk detections. Murrelet presence confirmed. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit is not visible from any priority travel routes or use areas. Seen from Big Salt Lake in Middleground. Maximum Modification VQO. CVD problems? | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Unstable area excluded at northeast side of unit. Type B clearcut recommended because of blowdown potential. Blind lead at southern tip of unit should be left as leave island. Leave island eliminates need for 70' Tower. Class II stream at north end requires minimum 100' buffer. Class I stream on east side of unit requires minimum 100' buffer. This stream should receive an additional 0-100' no-cut buffer because wide floodplain. Class II stream leaving unit near southern corner requires a 100' buffer which was not flagged in the field as blue and white. This stream should be re-evaluated as Class II due to ephemeral nature despite low gradient and lack of barriers. Mitigation measures for this unit are F1, F5, F6, F8, F10, and W4. | | | |

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

VCU : 595

UNIT : 407

QUAD : C3-NW



- Revised Control Lake Project Boundary
- Post-Field Unit Boundary w/ Setting Codes
- Other Post-Field Unit Boundaries
- USFS Timber Types for Volc 4-7
- Eagle Tree Buffer of 330ft
- Existing & Rebuilt Roads
- F.S. Roads Under Construction
- Post-Field Proposed Roads
- Ahmu-Class 1 & Stream Chantypes
- Ahmu-Class 2 & Stream Chantypes
- Ahmu-Class 3 & Stream Chantypes
- Channel Type Change

- Lakes and Ponds
- Second Growth Units
- MMI 4
- McGilvery > 41
- Landings
- Stream & Lake NoCUT Buffers

May 16, 1994

.5 MILE

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

| | | | |
|--|--|---|-------------------------|
| VCU #: 595 | UNIT #: 407 | QUARTER QUAD: C3NW | PHOTO YR/#: 1991/990-97 |
| ACRES: 26.0 | VOL.: 750.6 MBF | LOGGING SYSTEM: Live Skyline | |
| LANDSCAPE ZONE: Unit is within the Steelhead Creek drainage southwest of Control Lake. | | | |
| Timber/Vegetation | Field Review: G. Hedin, 6/18/93 | Office Review: J. Goering | |
| Species composition predominantly hemlock with some cedar. Few spruce are present. Regeneration predominantly hemlock with a few spruce but is lacking cedar except in northeast portion. Steep slopes, rocky outcrops, and shallow soils. Lacking spruce and western red cedar regeneration. Promote spruce/cedar regeneration through planting. | | | |
| Logging/Transportation | Field Review: J. Doyal/ E. DeWilde/J. Herzberg, 6/17/93 | Office Review: M. Whitty | |
| Accessed by Road #72-82-6.1, spur road 72-82-6.1C has 960 feet of easy construction. Recommend large tower with live skyline/slackline rigging. Seventy percent uphill and 30% downhill yarding. Maximum yarding distance is approximately 750 feet. landing at 0+00R, Road #72-82-6.1C will require artificial anchors or approximately 300 foot guylines for anchoring in the rear quadrant. Fair unit economically. | | | |
| Watershed/Fisheries | Field Review: R. Rogers, 6/15/93 | Office Review: T. Stewart | |
| Southwest side of unit is a Class III with O/W flagging - directional fall and split yard away from stream. | | | |
| Soils/Geology | Field Review: R. Rogers, 6/15/93 | Office Review: T. Stewart | |
| Unit generally 50% to 60%. Minor soil creep. Attempt partial suspension near rock outcrop. | | | |
| Wildlife | Field Review: C. Confer, 6/15/93 | Office Review: M. Hall | |
| No concerns. Heavy bear sign/use throughout area. Wolf scat observed. Level 1 snag retention. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit not seen from any priority travel route or use area. Scenic viewshed - not seen. Maximum Modification VQO. Scenic Viewshed LUD. Seen from Road 30 in Foreground. Maximum Modification VQO. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Type A clearcut leaving unmerchantable trees in western 1/2 of unit where practical. Directional fall trees away from Class III stream on west side of unit. Mitigation measures for this unit are F6 and W5. Note: Logging engineers should review the need for two spur roads and landings. | | | |

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

VCU : 595

UNIT : 408

QUAD : C3-NW



- Revised Control Lake Project Boundary
- Post-Field Unit Boundary w/ Setting Codes
- Other Post-Field Unit Boundaries
- USFS Timber Types for Volc 4-7
- Eagle Tree Buffer of 330ft
- Existing & Rebuilt Roads
- F.S. Roads Under Construction
- Post-Field Proposed Roads
- Ahmu-Class 1 & Stream Chantypes
- Ahmu-Class 2 & Stream Chantypes
- Ahmu-Class 3 & Stream Chantypes
- Channel Type Change

- Lakes and Ponds
- Second Growth Units
- MMI 4
- McGilvery > 41
- Landings
- Stream & Lake NoCUT Buffers

May 16, 1994

.5 MILE

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

| | | | |
|--|--|---|-------------------------|
| VCU #: 595 | UNIT #: 408 | QUARTER QUAD: C3NW | PHOTO YR/#: 1991/990-97 |
| ACRES: 22.1 | VOL.: 532.3 MBF | LOGGING SYSTEM: Swingyarder/Running Skyline | |
| LANDSCAPE ZONE: Unit is within the Steelhead Creek drainage south of Control Lake. | | | |
| Timber/Vegetation | Field Review: J. Miller, 6/29/93 | Office Review: J. Goering | |
| Species composition predominantly hemlock with some cedar. Few spruce are present. Predominantly hemlock regeneration. Lacking spruce and western red cedar regeneration. Moderately low volume, mixed-species with < 50% canopy closure in the western half (lower elevations). Poor soil drainage areas within the western half of the unit. Promote spruce/cedar regeneration through planting. | | | |
| Logging/Transportation | Field Review: J. Estabrook/D. Keister/C. Giles, 6/25/93 | Office Review: M. Whitty | |
| Accessed by Road #71-82-31.1. Recommend swing yarder with running skyline. One hundred percent downhill yarding; maximum yarding distance is approximately 850 feet. Good suspension is available but not required. Fair to poor economic feasibility. Economic feasibility is unclear due to numerous units accessed by mainline roads. | | | |
| Watershed/Fisheries | Field Review: J. Knutzen, 6/17/93 | Office Review: T. Stewart | |
| Supply 100' buffer on unit stream at north end of unit. | | | |
| Soils/Geology | Field Review: J. Knutzen, 6/17/93 | Office Review: T. Stewart | |
| Gentle slopes with good stability. No concerns. | | | |
| Wildlife | Field Review: H. Sloan, 6/17/93 | Office Review: M. Hall | |
| Large wetlands to north of unit below control lake. Low wildlife sign. No concerns. Retain Level 1 structure retention. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit not seen from any priority travel route or use area. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Type A clearcut. Split yard and directional fall away from Class III stream that flows southeast to northwest through northeast part of unit. 100' buffers on the lower part of this stream and the stream to the east form the northern unit boundary. Mitigation measures for this unit are: F5, F6, F8, F10, and W5. | | | |

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

VCU : 595

UNIT : 409

QUAD : C3-NW



- Revised Control Lake Project Boundary
- Post-Field Unit Boundary w/ Setting Codes
- Other Post-Field Unit Boundaries
- USFS Timber Types for Volc 4-7
- Eagle Tree Buffer of 330ft
- Existing & Rebuilt Roads
- F.S. Roads Under Construction
- Post-Field Proposed Roads
- Ahmu-Class 1 & Stream Chantypes
- Ahmu-Class 2 & Stream Chantypes
- Ahmu-Class 3 & Stream Chantypes
- Channel Type Change

- Lakes and Ponds
- Second Growth Units
- MMI 4
- McGilvery > 41
- Landings
- Stream & Lake NoCUT Buffers

.5 MILE

May 16, 1994

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

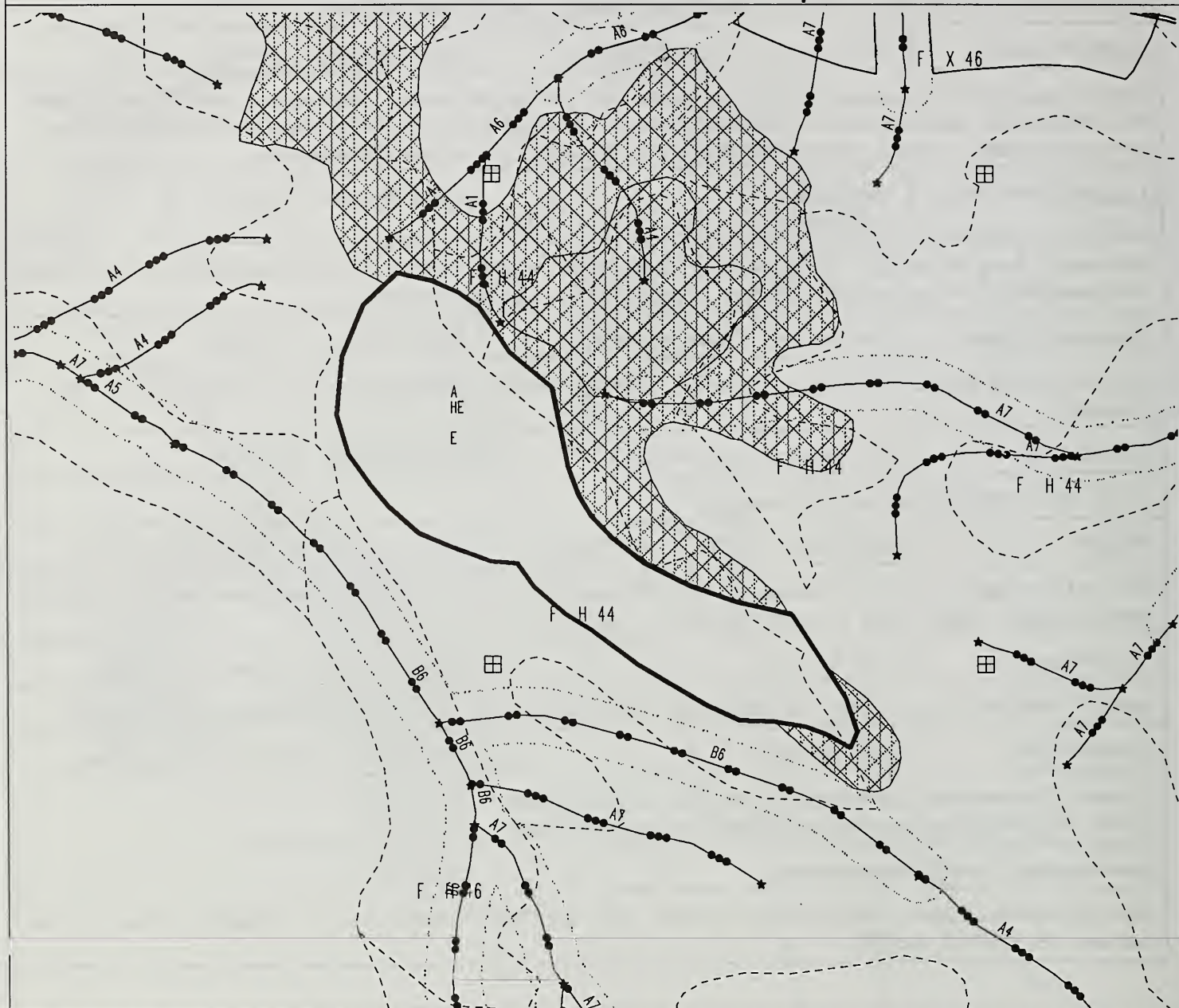
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|---|--|---|-------------------------|
| VCU #: 595 | UNIT #: 409 | QUARTER QUAD: C3NW | PHOTO YR/#: 1991/990-98 |
| ACRES: 27.5 | VOL.: 685.4 MBF | LOGGING SYSTEM: Swingyarder/Running Skyline | |
| LANDSCAPE ZONE: Unit is within Steelhead Creek drainage south of Control Lake. | | | |
| Timber/Vegetation | Field Review: G. Hedin, 6/29/93 | Office Review: J. Goering | |
| Species composition predominantly hemlock and cedar with a few spruce present. Regeneration predominantly hemlock but includes a few cedar and spruce. Numerous muskegs are located around the unit incorporated with mixed species, low volume timber. Many small drainages throughout unit along with poor soil drainage areas. | | | |
| Logging/Transportation | Field Review: J. Estabrook/C. Giles/D. Keister, 6/24/93 | Office Review: M. Whitty | |
| Accessed by Road #71-82-31.1. Recommend swing yarder with running skyline. One hundred percent downhill yarding. Maximum distance is approximately 900 feet. Potentially poor economic feasibility. | | | |
| Watershed/Fisheries | Field Review: J. Knutzen, 6/17/93 | Office Review: T. Stewart | |
| Split yard stream in south-central area. Do not cross stream along lower northeast side of unit. This should be unit boundary. | | | |
| Soils/Geology | Field Review: J. Knutzen, 6/17/93 | Office Review: T. Stewart | |
| Gentle slopes with good stability. No concerns. | | | |
| Wildlife | Field Review: H. Sloan, 6/17/93 | Office Review: M. Hall | |
| Bear and deer sign/use evident. Muskegs surround unit within 1/4 - 1/2 mile. Sharp-shinned hawk observed flying. No special concerns. Retain Level 1 structure retention. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| See list. Seen from Control Lake in Middleground. Partial Retention VQO. Could meet Retention with little work. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Type G shelterwood harvest to meet partial retention. Split yard Class III stream in unit. Mitigation measures for this unit are: F6, F8, F10, and W2. | | | |

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

VCU : 595

UNIT : 410

QUAD : C3-NW



- Revised Control Lake Project Boundary
- Post-Field Unit Boundary w/ Setting Codes
- Other Post-Field Unit Boundaries
- USFS Timber Types for Volc 4-7
- Eagle Tree Buffer of 330ft
- Existing & Rebuilt Roads
- F.S. Roads Under Construction
- Post-Field Proposed Roads
- Ahmu-Class 1 & Stream Chantypes
- Ahmu-Class 2 & Stream Chantypes
- Ahmu-Class 3 & Stream Chantypes
- Channel Type Change

- Lakes and Ponds
- Second Growth Units
- MMI 4
- McGilvery > 41
- Landings
- Stream & Lake NoCUT Buffers

May 16, 1994

0.5 MILE

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

| | | | |
|---|------------------------------------|---|--------------------------|
| VCU #: 595 | UNIT #: 410 | QUARTER QUAD: C3NW | PHOTO YR/#: 1991/690-194 |
| ACRES: 30.1 | VOL.: 866.4 MBF | LOGGING SYSTEM: Helicopter | |
| LANDSCAPE ZONE: Unit is in the Steelhead Creek drainage adjacent to Rio Roberts Watershed. | | | |
| Timber/Vegetation | Field Review: T. Stecher, 7/28/93 | Office Review: J. Goering | |
| Species composition predominantly hemlock and cedar with a few spruce present. Predominantly hemlock regeneration. Lacking spruce and western red cedar regeneration overall. Alaska yellow cedar decline evident. Promote spruce/cedar regeneration through planting or consider partial retention. | | | |
| Logging/Transportation | Field Review: none | Office Review: K. Jehnke | |
| Unit <u>not</u> visited by logging engineers. Helicopter logging due to resource constraints (McGilvery soils). Landings located in Unit 596-410 are small (swing yarder type) and may need to be expanded or alternate between landings while logging. Average flight distance = 2800 feet; average flight slope = -14%; maximum flight slope = -17%. These same landings will also be needed to helicopter log 595-409. | | | |
| Watershed/Fisheries | Field Review: B. Romey, 7/15/93 | Office Review: T. Stewart | |
| Class IIb, streams flagged O/W, directional fall away from stream. Class IIa streams flagged B/W require 100' buffer. Streams are entirely out of unit. | | | |
| Soils/Geology | Field Review: M. Minnillo, 7/15/93 | Office Review: T. Stewart | |
| Helicopter logging prescribed. Also lower unit boundary below bluffs in northern portion of unit, approximately 1100' elevation. This will limit the possibility of major soil disturbance. | | | |
| Wildlife | Field Review: M. Minnillo, 7/15/93 | Office Review: M. Hall | |
| High use deer bedding area. Maintain northern unit boundary below 1,100' in order to retain more highly used habitat along muskegs to north of unit. Maintain southern unit boundary 50' away from muskeg complex. Prescribed helicopter logging per soils/geology concerns would retain structure (Level 1) and as many snags as possible. Deer winter range. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit not seen from any priority travel route or use area. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Boundary modified to exclude McGilvery soils at upper part of unit. Partial cut with retention of trees 15" DBH and smaller, mainly cedar (Type E overstory removal) to maintain the yellow cedar component. Remove dead but merchantable cedar. Maintain 100' buffer from Class II streams. Mitigation measures for this unit are: F1, F5, T1, and W2. | | | |

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

VCU : 595

UNIT : 411

QUAD : C3-NW



- Revised Control Lake Project Boundary
- Post-Field Unit Boundary w/ Setting Codes
- Other Post-Field Unit Boundaries
- USFS Timber Types for Volc 4-7
- Eagle Tree Buffer of 330ft
- Existing & Rebuilt Roads
- F.S. Roads Under Construction
- Post-Field Proposed Roads
- Ahmu-Class 1 & Stream Chantypes
- Ahmu-Class 2 & Stream Chantypes
- Ahmu-Class 3 & Stream Chantypes
- Channel Type Change

- Lakes and Ponds
- Second Growth Units
- MMI 4
- McGilvery > 41
- Landings
- Stream & Lake NoCUT Buffers

.5 MILE

March 17, 1995

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

| | | | |
|--|---|---|--------------------------|
| VCU #: 595 | UNIT #: 411 | QUARTER QUAD: C3NW | PHOTO YR/#: 1991/890-131 |
| ACRES: 32.2 | VOL.: 658.5 MBF | LOGGING SYSTEM: Slackline with 100' Tower, Live Skyline, Shovel | |
| LANDSCAPE ZONE: Unit is within the Kogish Mountain Corridor. | | | |
| Timber/Vegetation | Field Review: G. Hedin, 7/06/93 | Office Review: J. Goering | |
| Species composition predominantly hemlock and cedar with a few spruce and lodgepole present. Regeneration predominantly hemlock and includes a few cedar but is lacking spruce. Low volume, mixed-species, multi-canopy with < 50% canopy closure in the northern portion of the unit. Some thin soil, poor soil drainage areas. Consider partial retention/seedtree harvest to promote regenerative success in the northern half. Promote spruce/cedar regeneration through planting in the southern half. | | | |
| Logging/Transportation | Field Review: K. Martin/K. Jehnke, 7/05/93 | Office Review: M. Whitty | |
| Recommend large tower in a live skyline configuration. 80% uphill yarding; maximum distance is approximately 1,000'. 20% shovel logging; maximum distance is approximately 400' to 500'. Split yard streams which require full suspension, will affect the final boundary locations. Numerous additional profiles are necessary to determine where logs can be fully suspended over these streams. This unit has high blowdown potential. Economic feasibility appears to be favorable. | | | |
| Watershed/Fisheries | Field Review: R. Rogers, J. Metzger, 6/23/93 | Office Review: T. Stewart | |
| No fisheries streams within unit. All streams are Class III. Small stream entering from west directional fall and split yard. Streams running down western and eastern area are deeply incised, unstable, and require special prescriptions to retain rooting strength in inner gorge. Directional fall and achieve full suspension, leaving all non-merchantable trees and windfirm merchantable trees to keep at least 70' tree spacing. This applies to inner gorge area (approximately 200' on each side of streams) applies to all of the western stream and lower half of eastern stream below the large cliff and rockslide. Stream in the central upper area directional fall and split yard (stream out of unit in final layout). Stream in center of unit directional fall and split yard. Leave all trees at the confluence of the eastern and central stream (where flagged) for stability concerns. | | | |
| Soils/Geology | Field Review: R. Rogers/J. Metzger, 6/23/93 | Office Review: T. Stewart | |
| Weak rock overlain by shallow soils. Numerous shallow landslides within inner gorges of western and lower half of eastern stream. Full suspension yarding and selective harvest required in inner gorge to protect shallow soils and retain root strength. | | | |
| Wildlife | Field Review: R. Rogers/J. Metzler, 6/23/93 | Office Review: M. Hall | |
| Unit within large tract of previously unentered old-growth. Retain level 1 structure retention. Confirmed murrelet eggshell found in muskeg located on north border of unit. Murrelet dawn survey conducted on 7/30/93 - murrelet presence determined. Occupied behavior exhibited to north, northeast of unit within 1,000'. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit not seen from any priority travel route or use area. Seen from Big Salt Lake in Middleground. Maximum Modification VQO. CVD problems? | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |

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| Interdisciplinary Team Recommendations | |
| <p>Unit modified for leave island between streams in southeastern portion of unit. Additional leave island (Type D Clearcut) at northwest of unit between two NW streams. and leave reserve trees along streams as indicated under Watershed/ Fisheries. Type A clearcut in remainder of unit. Full suspension possible on west end along NW stream. Split yard eastern stream and harvest only to break in slope. Mitigation measures for this unit are: F6, F7, F8, W1 and W5.</p> | |

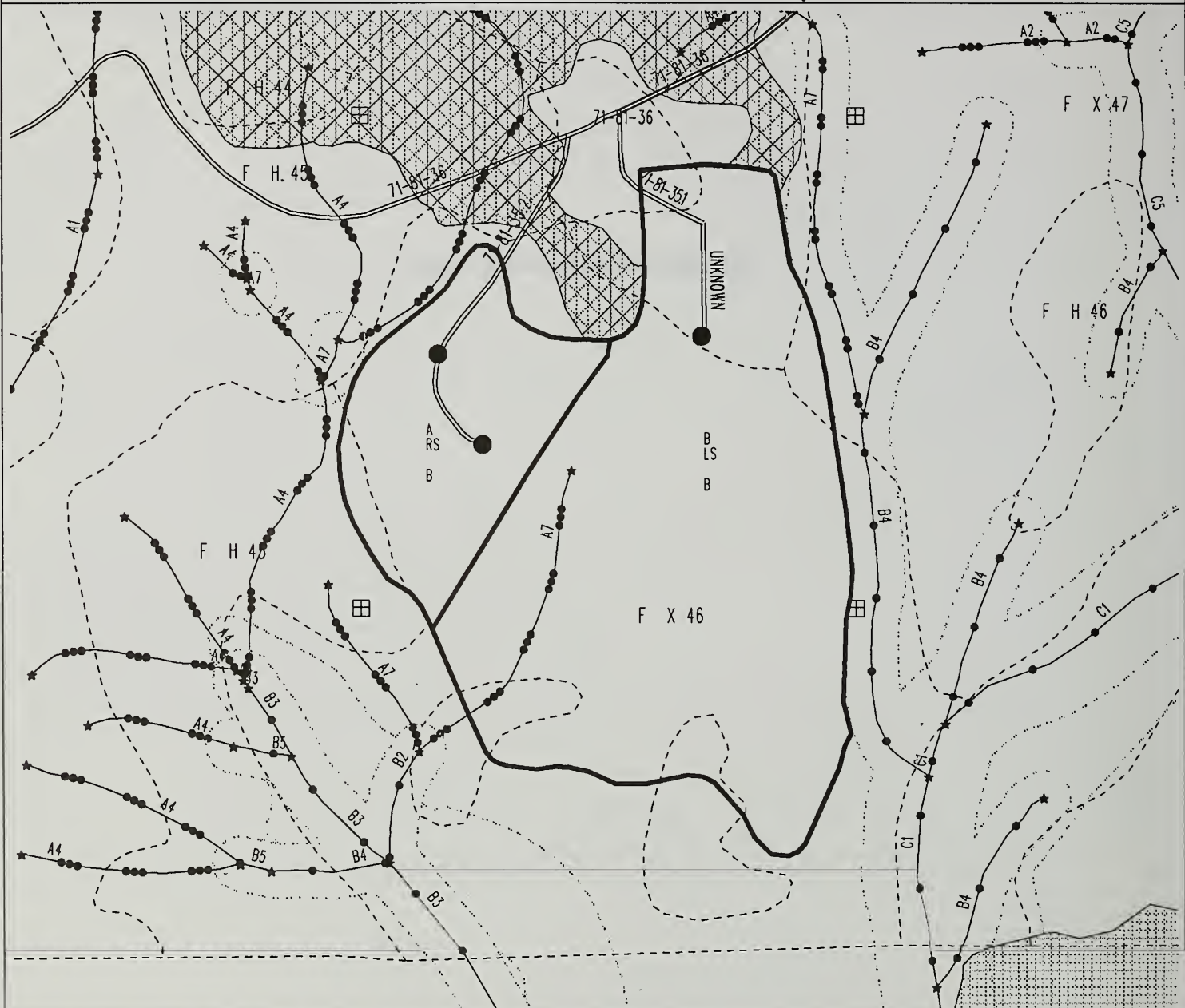
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CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

VCU : 595

UNIT : 412

QUAD : C3-NW



- Revised Control Lake Project Boundary
- Post-Field Unit Boundary w/ Setting Codes
- Other Post-Field Unit Boundaries
- USFS Timber Types for Volc 4-7
- Eagle Tree Buffer of 330ft
- Existing & Rebuilt Roads
- F.S. Roads Under Construction
- Post-Field Proposed Roads
- Ahmu-Class 1 & Stream Chantypes
- Ahmu-Class 2 & Stream Chantypes
- Ahmu-Class 3 & Stream Chantypes
- Channel Type Change

- Lakes and Ponds
- Second Growth Units
- MMI 4
- McGilvery > 41
- Landings
- Stream & Lake NoCUT Buffers

May 16, 1994

.5 MILE

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

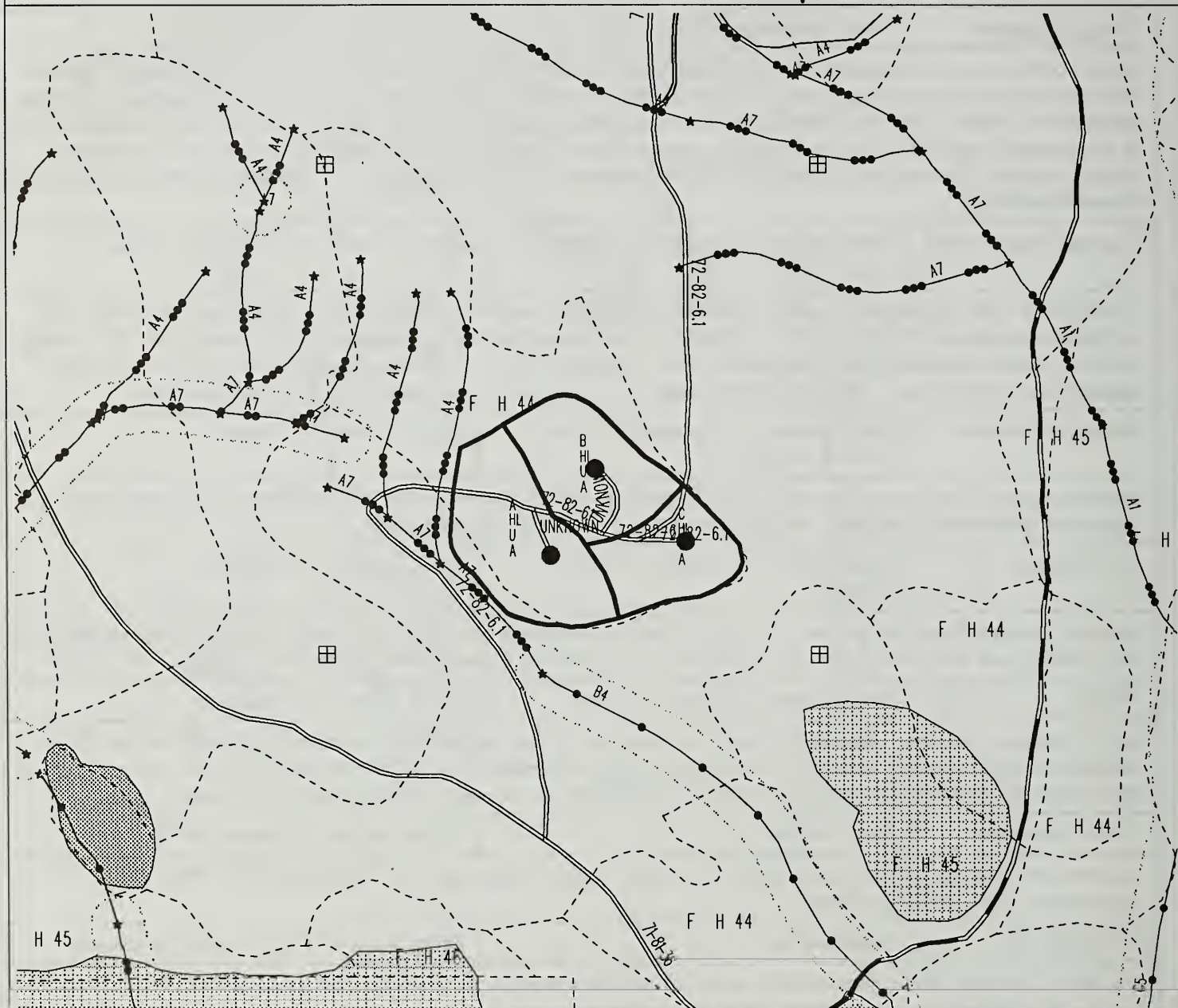
| | | | |
|---|--|--|-------------------------|
| VCU #: 595 | UNIT #: 412 | QUARTER QUAD: C3NW | PHOTO YR/#: 1991/990-36 |
| ACRES: 87.6 | VOL.: 3103.6 MBF | LOGGING SYSTEM: Live Skyline/Swingyarder with 100' Tower | |
| LANDSCAPE ZONE: Unit is within proposed Steelhead Creek drainage north of Big Salt Lake. | | | |
| Timber/Vegetation | Field Review: M. Case, 7/08/93 | Office Review: J. Goering | |
| Species composition predominantly hemlock and cedar with some spruce present. Regeneration predominantly hemlock with some spruce but is lacking cedar. Windthrow pockets present in south-central portion of unit coinciding with dense regeneration pockets. Low to moderate amounts of mistletoe infection evident in canopy. Steep relatively shallow soils in the northeast portion and poor soil drainage areas within the southwest portion. Promote spruce/cedar regeneration through planting. Harvest all mistletoe infected hemlock and cut infected regeneration. Windthrow potential limits partial retention feasibility. | | | |
| Logging/Transportation | Field Review: E. Urstadt/J. Spolar/C. Giles, 7/8/93 | Office Review: M. Whitty/E. Urstadt | |
| Landing at 0+00R will require deadmen, twisters, or equivalent anchors. Partial suspension indicated on profile will require an extension of Rd #71-81-35.1. Tailholds to east of this landing will require skylines through the TTRA buffer. Use MSP carriage with slackline configuration here. Shotgun system for remaining roads. Swingyard western unit; approximately 25% of area. High blowdown potential; no partial cut. All uphill logging. Good economics. | | | |
| Watershed/Fisheries | Field Review: G. Jackson/J Metzler, 6/30/93, 8/13/93 | Office Review: T. Stewart | |
| Stream to east is Class I requiring 100' buffer. Stream to west does not require 100' buffer but should have directional falling and split yarding (originally thought to be Class II stream and flagged B/W). | | | |
| Soils/Geology | Field Review: G. Jackson, 6/30/93, 8/13/93 | Office Review: T. Stewart | |
| Slopes in the majority of the unit are < 50% and stable. Steeper slopes (up to 80%) occur along the northern half of the east boundary and have McGilvery soils. This area should receive at least partial suspension. | | | |
| Wildlife | Field Review: C. Confer, 8/13/93 | Office Review: R. Fairbanks | |
| Level 2 structure retention. Retain 100' buffer on southwest corner muskeg due to wetness of the area and quality of habitat for wildlife species. Bear and deer sign/use evident. Northern third of unit was added after the goshawk survey was conducted; therefore this area may not have adequate survey coverage, although Station 6 is nearby. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit not seen from any priority travel route or use area. Seen from Big Salt Lake in Middleground. Maximum Modification VQO. CVD problems? | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Stream on east side requires 100' buffer. Class I stream on east side requires 50' selective cut. Stream in west does not require buffer as Class III (was flagged with 100' buffer). Wildlife leave island left at north end of unit because of non CFL. Recommend Type B clearcut because of windthrow and mistletoe. Partial suspension required and achievable at upper end of unit. Stream in south central area not practical to spilt yard. Requires guylines through TTRA buffer. Mitigation measures for this unit are F1, F6, F5, F8 and W4. | | | |

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

VCU : 595

UNIT : 413

QUAD : C3-NW



- Revised Control Lake Project Boundary
- Post-Field Unit Boundary w/ Setting Codes
- Other Post-Field Unit Boundaries
- USFS Timber Types for Volc 4-7
- Eagle Tree Buffer of 330ft
- Existing & Rebuilt Roads
- F.S. Roads Under Construction
- Post-Field Proposed Roads
- Ahmu-Class 1 & Stream Chantypes
- Ahmu-Class 2 & Stream Chantypes
- Ahmu-Class 3 & Stream Chantypes
- Channel Type Change

- Lakes and Ponds
- Second Growth Units
- MMI 4
- McGilvery > 41

- Landings
- Stream & Lake NoCUT Buffers

.5 MILE

May 16, 1994

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

| | | | |
|---|--|---|-------------------------|
| VCU #: 595 | UNIT #: 413 | QUARTER QUAD: C3NW | PHOTO YR/#: 1991/990-36 |
| ACRES: 17.5 | VOL.: 319.1 MBF | LOGGING SYSTEM: Highlead with 70' Tower | |
| LANDSCAPE ZONE: Unit is in the Steelhead Creek drainage southwest of Control Lake. | | | |
| Timber/Vegetation | Field Review: B. Hasebe, 8/4/93 | Office Review: J. Goering | |
| Species composition predominantly hemlock and cedar with a few spruce present. Regeneration predominantly hemlock with a few spruce but is lacking cedar. Stand is lacking nurse logs and advance regeneration. Regeneration concerns due to low site index soils and poor quality of regeneration. Steep, shallow soils, and poor soil drainage areas within unit. Alaska yellow cedar decline evident. Fairly dense understory vegetation. Analyze for economic feasibility given the low site productivity and low volume of the stand. Consider partial retention/seedtree harvest to promote regenerative success and desirable species composition. | | | |
| Logging/Transportation | Field Review: J. Doyle/ E. DeWilde/J. Herzberg, 6/17/93 | Office Review: E. Urstadt | |
| Unit is accessed by Rd #72-82-6.1 and 3 short spurs which are easy to medium construction. Recommend highlead logging system (80% uphill and 20% downhill logging). Blowdown may be a problem at top of unit. "Feather" edge or leave submerchantile trees to alleviate. Unit is economical. | | | |
| Watershed/Fisheries | Field Review: R. Rogers, 6/15/93 | Office Review: T. Stewart | |
| A Class III stream flagged O/W - directional fall and split yard away from stream on southwest side of unit. | | | |
| Soils/Geology | Field Review: R. Rogers, 6/15/93 | Office Review: T. Stewart | |
| No major concerns outside of partial suspension on moderate slopes. | | | |
| Wildlife | Field Review: C. Confer, 6/15/93 | Office Review: M. Hall | |
| Marten scat located in southwest end of unit. Wolf kill/scat in central portion of unit. Light to moderate deer use. Retain Level 1 structure. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit not seen from any priority travel route or use area. Scenic viewshed - not seen. Maximum Modification VQO. Scenic Viewshed LUD. Seen Road 30 in Foreground. Maximum Modification VQO. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Type A clearcut, but fall and leave some nurse logs for regeneration and feather upper edge to reduce blowdown. Monitor for possible planting recommendations. Directionally fall trees away from small section of Class III stream on west end of unit. Mitigation measures for this unit are: F3, F6, F8, F10, and W5. | | | |

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

VCU : 595

UNIT : 414

QUAD : C3-NW



- Revised Control Lake Project Boundary
- Post-Field Unit Boundary w/ Setting Codes
- Other Post-Field Unit Boundaries
- USFS Timber Types for Volc 4-7
- Eagle Tree Buffer of 330ft
- Existing & Rebuilt Roads
- F.S. Roads Under Construction
- Post-Field Proposed Roads
- Ahmu-Class 1 & Stream Chantypes
- Ahmu-Class 2 & Stream Chantypes
- Ahmu-Class 3 & Stream Chantypes
- Channel Type Change

- Lakes and Ponds
- Second Growth Units
- MMI 4
- McGilvery > 41
- Landings
- Stream & Lake NoCUT Buffers

March 17, 1995

.5 MILE

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

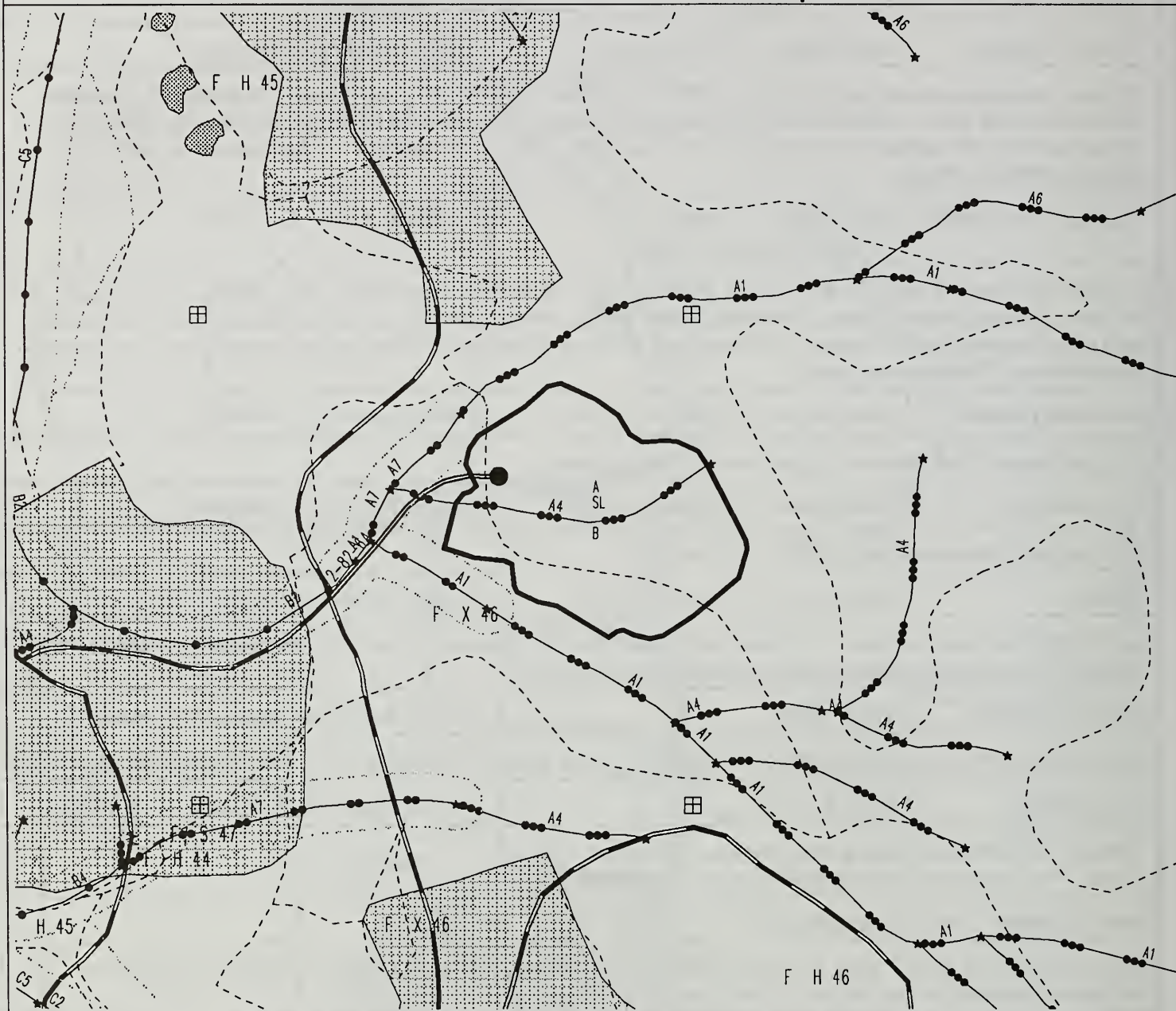
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|---|---|---|-------------------------|
| VCU #: 595 | UNIT #: 414 | QUARTER QUAD: C3NW | PHOTO YR/#: 1991/990-98 |
| ACRES: 45.5 | VOL.: 1324.5 MBF | LOGGING SYSTEM: Highlead with 70' Tower | |
| LANDSCAPE ZONE: Unit is in the Steelhead Creek drainage south of Control Lake. | | | |
| Timber/Vegetation | Field Review: M. Case, 6/21/93 | Office Review: J. Goering | |
| Species composition predominantly hemlock with some spruce. Few lodgepole are present. Predominantly hemlock regeneration with spruce. Southwestern portion contains steep, rocky slopes and relatively shallow soils. Muskeg inclusions within the northern portion of the unit. Fairly dense understory vegetation. Light amount of mistletoe infection evident in canopy. | | | |
| Logging/Transportation | Field Review: J. Estabrook/ C. Giles/D. Goude, 6/16/93 | Office Review: E. Urstadt | |
| This unit is accessed by Rd #71-82-31 which required 3,700' of medium construction. Three landings will be used. A 70' tower using highlead is the recommended harvest system. Partial suspension is not required, but could be achieved with minor landing position changes. No blowdown problems are expected. This unit can be partial cut, but it is not recommended. Economics are good. | | | |
| Watershed/Fisheries | Field Review: J. Knutzen, 6/15/93 | Office Review: A. Wolfson | |
| Splityard stream in southwestern region where it enters the unit. | | | |
| Soils/Geology | Field Review: J. Knutzen, 6/15/93 | Office Review: A. Wolfson | |
| Unit has gentle slopes and good stability. No concerns. | | | |
| Wildlife | Field Review: H. Sloan, 6/15/93 | Office Review: M. Hall | |
| Low wildlife use (deer and bear). Wetlands east of unit area HCC, adjacent to unit at south boundary. Retain Level 2 structure due to adjacent to HCC and naturally fragmented matrix. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit not seen from any priority travel route or use area. Seen Road 30 in Middleground. Maximum Modification VQO. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Unit is not within a block. Type A clearcut. Maintain 100' buffer on Class II stream on northern unit boundary. Mitigation measures for this unit are F5, F6, and W5. | | | |













CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD







VCU : 595

UNIT : 415

QUAD : C3-NW



-  Revised Control Lake Project Boundary
-  Post-Field Unit Boundary w/ Setting Codes
-  Other Post-Field Unit Boundaries
-  USFS Timber Types for Volc 4-7
-  Eagle Tree Buffer of 330ft
-  Existing & Rebuilt Roads
-  F.S. Roads Under Construction
-  Post-Field Proposed Roads
-  Ahmu-Class 1 & Stream Chantypes
-  Ahmu-Class 2 & Stream Chantypes
-  Ahmu-Class 3 & Stream Chantypes
-  Channel Type Change

-  Lakes and Ponds
 Second Growth Units
 MMI 4
 McGilvery > 41
 Landings
 Stream & Lake NoCUT Buffers

.5 MILE

May 16, 1994

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

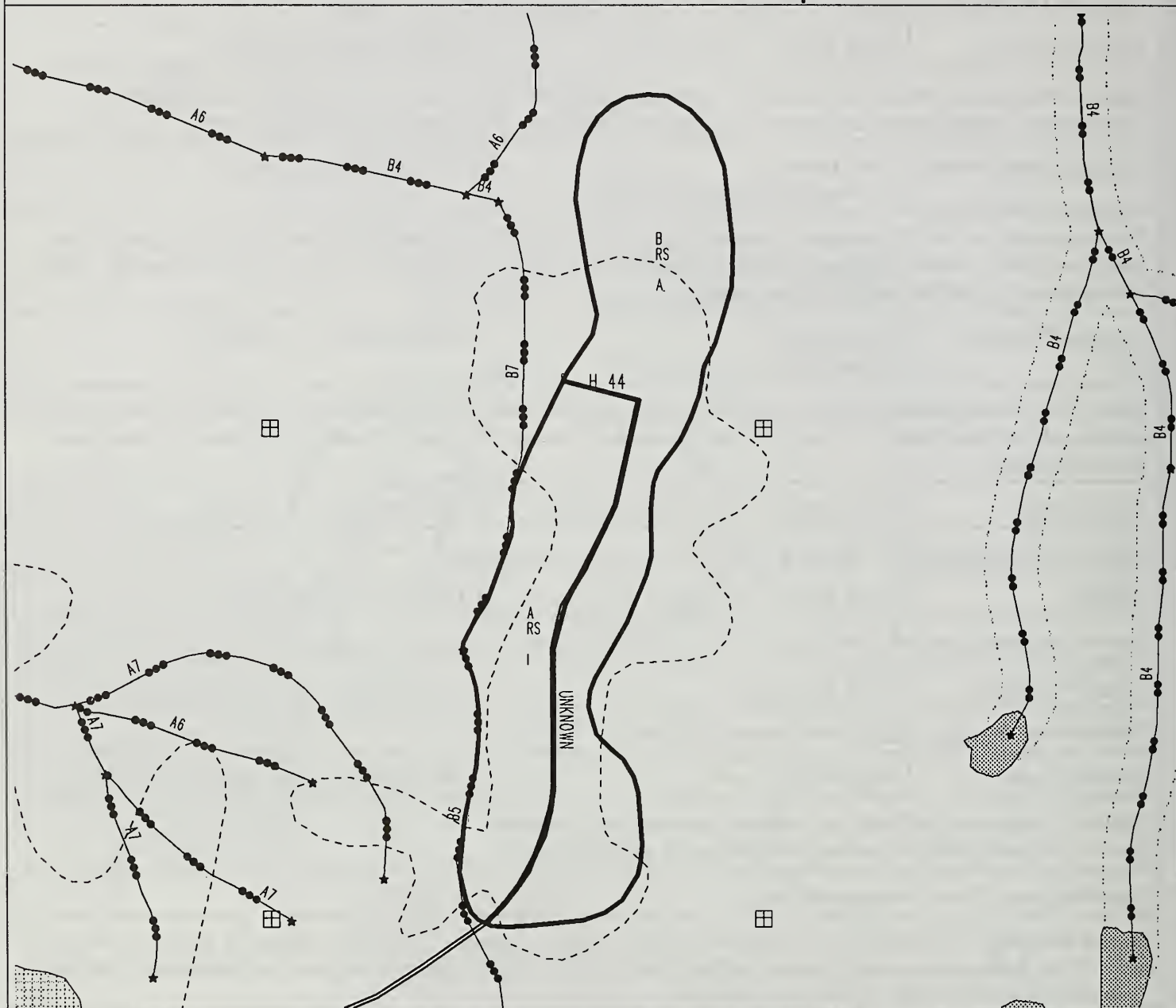
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|---|--|---|-------------------------|
| VCU #: 595 | UNIT #: 415 | QUARTER QUAD: C3NW | PHOTO YR/#: 1991/900-97 |
| ACRES: 18.8 | VOL.: 344.1 MBF | LOGGING SYSTEM: Slackline with 100' Tower | |
| LANDSCAPE ZONE: Unit is in the Steelhead Creek drainage, south of Control Lake. | | | |
| Timber/Vegetation | Field Review: J. Miller, 6/21/93 | Office Review: J. Goering | |
| Species composition predominantly hemlock with some cedar. Few spruce are present. Predominantly hemlock regeneration. Lacking spruce and western red cedar regeneration. Rock outcrops and shallow soils. | | | |
| Logging/Transportation | Field Review: T. Wetzel/G. Slawson, 7/28/93 | Office Review: E. Urstadt | |
| Unit is accessed by 490' of moderate construction, Rd #72-82-6A. The unit will be logged using a 100' tower with slackline system. Tailtrees will enable partial suspension as required by soils people. Unit is very economical. Partial cutting would be difficult unless done in wedges. | | | |
| Watershed/Fisheries | Field Review: J. Knutzen/R. Romey, 6/17/93 | Office Review: T. Stewart | |
| Class IIa on west-northwest boundary needs 100' buffer on lower 400' to slope break above. Class III, above Class IIa - harvest only to slope break of V-notch. Class IIa on south boundary needs 100' buffer. Directional fall away from Class III stream. | | | |
| Soils/Geology | Field Review: R. Rogers, 6/17/93 | Office Review: T. Stewart | |
| Partial suspension above 600' elevation required to minimize soil disturbance. | | | |
| Wildlife | Field Review: R. Rogers, 6/17/93 | Office Review: M. Hall | |
| Low to moderate deer use/wildlife use. No special concerns noted. Retain Level 1 structure. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit not seen from any priority travel route or use area. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Stream 1 requires 100' buffer below, but split yard above where it changes to Class III. Steams 2 and 3 are not near unit. Type B clearcut because of amount of harvest in vicinity. Partial suspension required and achievable. Mitigation measures for this unit are: F3, F5, F6, and W4. | | | |

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

VCU : 595

UNIT : 416

QUAD : C3-NW



- Revised Control Lake Project Boundary
- Post-Field Unit Boundary w/ Setting Codes
- Other Post-Field Unit Boundaries
- USFS Timber Types for Volc 4-7
- Eagle Tree Buffer of 330ft
- Existing & Rebuilt Roads
- F.S. Roads Under Construction
- Post-Field Proposed Roads
- Ahmu-Class 1 & Stream Chantypes
- Ahmu-Class 2 & Stream Chantypes
- Ahmu-Class 3 & Stream Chantypes
- Channel Type Change

- Lakes and Ponds
- Second Growth Units
- MMI 4
- McGilvery > 41
- Landings
- Stream & Lake NoCUT Buffers

May 16, 1994

.5 MILE

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

| | | | |
|--|--|---|--------------------------|
| VCU #: 595 | UNIT #: 416 | QUARTER QUAD: C3NW | PHOTO YR/#: 1991/690-196 |
| ACRES: 44.7 | VOL.: 735.9 MBF | LOGGING SYSTEM: Swingyarder/Running Skyline | |
| LANDSCAPE ZONE: Unit is in the Steelhead Creek drainage. | | | |
| Timber/Vegetation | Field Review: G. Hedin, 6/25/93 | Office Review: J. Goering | |
| Species composition includes hemlock, cedar, spruce, and lodgepole. Regeneration predominantly hemlock with spruce but includes a few cedar. Muskeg incursions incorporated with mixed species, low volume timber in most areas. Some thin soil, poor soil drainage areas. Numerous muskegs are located around the unit. | | | |
| Logging/Transportation | Field Review: B. Wilkinson/ K. Martin/B. Webster, 6/25/93 | Office Review: E. Urstadt | |
| Harvest system is swing-yard to continuous roadside landing. 70% is uphill and 30% is downhill yarding. Partial suspension is not required, but will be obtained. Landing "A" will need deadman or equipment for guys. The southeast boundary will need tie-backs for tailholds. No blowdown problems are expected. Unit can be extended north (as flagged). Unit is accessed by Rd #72-82-8.0 which has 4,100' easy and 1,000' medium construction. Economics are fair. | | | |
| Watershed/Fisheries | Field Review: E. Ablow, 7/24/93 | Office Review: T. Stewart | |
| Stream 1-B5 requires a 25' no program buffer. Stream 1 (B7 changing to a B5 channel) forms the western boundary of the unit. It is a Class III water quality stream. Recommend harvest to slope break and directional fall away from stream. | | | |
| Soils/Geology | Field Review: E. Ablow, 7/24/93 | Office Review: T. Stewart | |
| Unit averages 30 percent slopes. The unit is stable with no concerns. | | | |
| Wildlife | Field Review: H. Sloan 7/24/93 | Office Review: M. Hall | |
| Wetlands surround unit. Moderate deer sign/use - two observed. Also bear sign/use evident. Woodpeckers audible. Retain Level 2 structure due to adjacent to HCC and naturally fragmented matrix. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit not seen from any priority travel route or use area. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| 25' no harvest buffer along B5 southwest part of unit. Directional fall trees from this stream where it is channel type B7. Type A clearcut above road and at setting on end of road. Below road use running skyline and harvest 50% of unit by harvesting every other yarding corridor and leaving the opposite corridor. (I type strip group selection). Mitigation measures for this unit are: F5, F6, W2, and W5. | | | |

NO UNIT MAP
UNIT DROPPED OR DEFERRED

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

| | | | |
|---|---------------|---|-------------|
| VCU #: 595 | UNIT #: 417 | QUARTER QUAD: | PHOTO YR/#: |
| ACRES: | VOL.: | LOGGING SYSTEM: | |
| LANDSCAPE ZONE: | | | |
| Timber/Vegetation | Field Review: | Office Review: | |
| | | | |
| Logging/Transportation | Field Review: | Office Review: | |
| | | | |
| Watershed/Fisheries | Field Review: | Office Review: | |
| | | | |
| Soils/Geology | Field Review: | Office Review: | |
| | | | |
| Wildlife | Field Review: | Office Review: | |
| | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit not seen from any priority travel route or use area. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Unit adjacent to clearcut on native land on western unit boundary. Deferred. | | | |

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

VCU : 595

UNIT : 418

QUAD : C3-NW



- Revised Control Lake Project Boundary
- Post-Field Unit Boundary w/ Setting Codes
- Other Post-Field Unit Boundaries
- USFS Timber Types for Volc 4-7
- Eagle Tree Buffer of 330ft
- Existing & Rebuilt Roads
- F.S. Roads Under Construction
- Post-Field Proposed Roads
- Ahmu-Class 1 & Stream Chantypes
- Ahmu-Class 2 & Stream Chantypes
- Ahmu-Class 3 & Stream Chantypes
- Channel Type Change

- Lakes and Ponds
- Second Growth Units
- MMI 4
- McGilvery > 41
- Landings
- Stream & Lake NoCUT Buffers

May 16, 1994

0.5 MILE

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

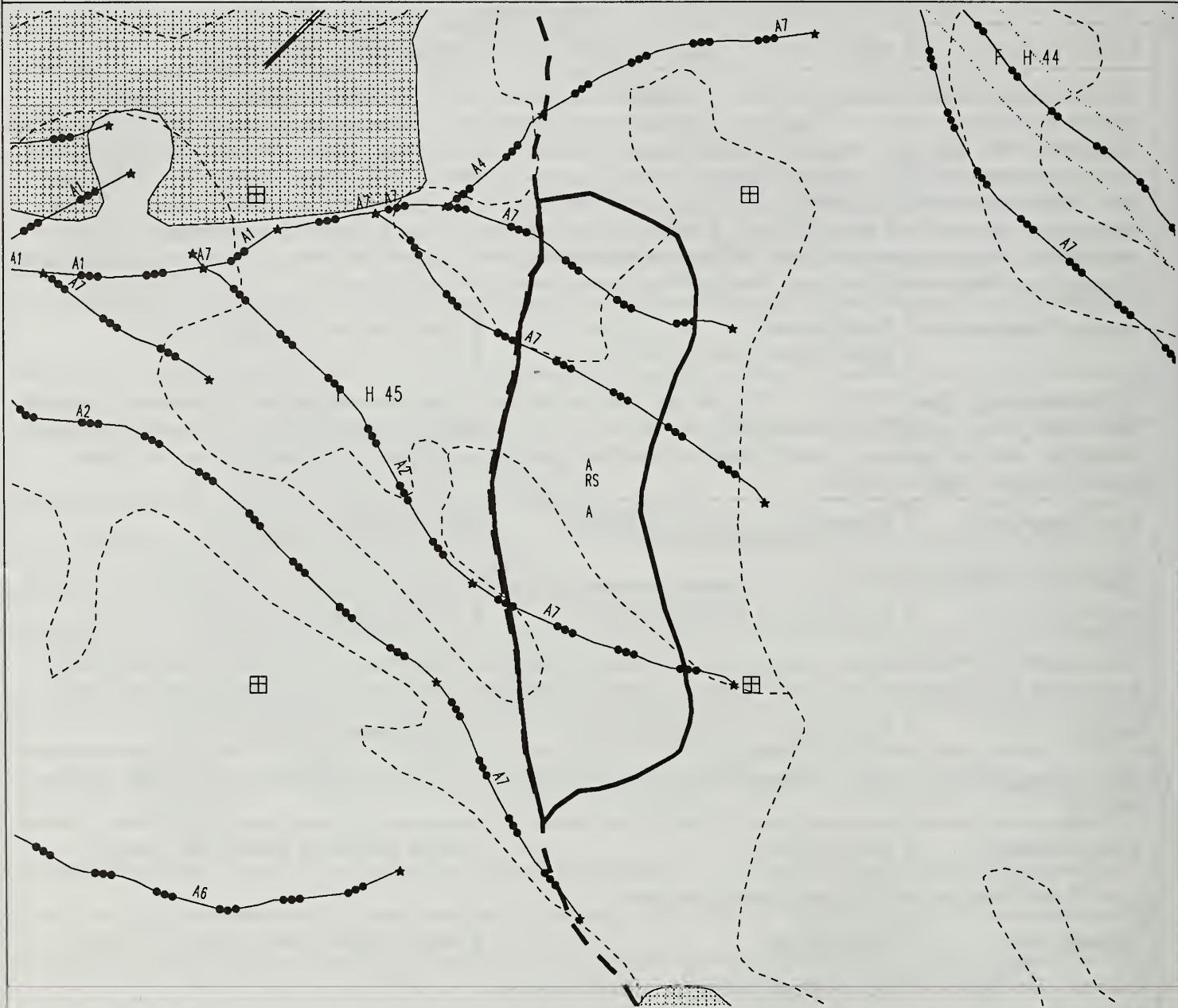
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|--|--|---|--------------------------|
| VCU #: 595 | UNIT #: 418 | QUARTER QUAD: C3NW | PHOTO YR/#: 1991/990-100 |
| ACRES: 10.1 | VOL.: 211.2 MBF | LOGGING SYSTEM: Swingyarder/Running Skyline | |
| LANDSCAPE ZONE: Unit is located in the Steelhead Creek drainage. | | | |
| Timber/Vegetation | Field Review: J. Goering, 7/13/93 | Office Review: J. Goering | |
| Species composition predominantly hemlock with some cedar. Few spruce are present. Regeneration predominantly hemlock but includes a few cedar and spruce. Alaska yellow cedar decline evident in the southwest and southeast portion incorporated with muskegs. Windthrow damage present in middle portion of unit within a wet area. Generally lacking spruce and western redcedar regeneration due to overstory composition and closed canopy. Some poor soil drainage areas. Regeneration mostly on nurse logs and consists of hemlock. Unit encompasses a short slope with muskeg and unproductive site above and below the unit. Road bisects small productive site. Relocate road to minimize loss to site productivity. Promote spruce and cedar regeneration through shelterwood or seed tree harvest. Exclude wet areas from retention to minimize windthrow loss. Clearcut would leave almost pure hemlock stand. | | | |
| Logging/Transportation | Field Review: E. DeWilde/K. Martin, 7/08/93 | Office Review: J. Doyal | |
| Unit is accessed by Road #72-82-7.2. This spur has 2100 feet of easy to medium construction. Landings will be small. Recommend swing yarding using running skyline. Seventy percent is downhill logging. Partial suspension can occur on most of the unit; full suspension is not possible without helicopter logging. Partial cut is not feasible due to steep downhill logging. Good economics. | | | |
| Watershed/Fisheries | Field Review: R. Rogers, 6/15/93 | Office Review: T. Stewart | |
| No streams in unit; no concerns. | | | |
| Soils/Geology | Field Review: R. Rogers, 6/15/93 | Office Review: T. Stewart | |
| Unit mapped as 100% McGilvery, however soils are poorly drained (not McGilvery) and no major instability noted. Recommend full suspension if possible. Partial suspension is acceptable if soil disturbance is kept to less than 15%. | | | |
| Wildlife | Field Review: C. Confer, 6/15/93 | Office Review: M. Hall | |
| Area appears deficient of snags - recommend Level 3 structure retention. Muskegs surrounding unit to south moderate deer use. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit not seen from any priority travel route or use area. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Recommend full suspension if possible. Unit mapped as 100% McGilvery soils, but very wet - not McGilvery. Type B clearcut. Mitigation measures for this unit include: F3, F8, and W4. | | | |



















CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

VCU : 595

UNIT : 419

QUAD : C3-NW



- | | | | |
|---|---|---|-----------------------------|
|  | Revised Control Lake Project Boundary |  | Lakes and Ponds |
|  | Post-Field Unit Boundary w/ Setting Codes |  | Second Growth Units |
|  | Other Post-Field Unit Boundaries |  | MMI 4 |
|  | USFS Timber Types for Volc 4-7 |  | McGilvery > 41 |
|  | Eagle Tree Buffer of 330ft |  | Landings |
|  | Existing & Rebuilt Roads |  | Stream & Lake NoCUT Buffers |
|  | F.S. Roads Under Construction | | |
|  | Post-Field Proposed Roads | | |
|  | Ahmu-Class 1 & Stream Chantypes | | |
|  | Ahmu-Class 2 & Stream Chantypes | | |
|  | Ahmu-Class 3 & Stream Chantypes | | |
|  | Channel Type Change | | |

June 09, 1994

.5 MILE

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

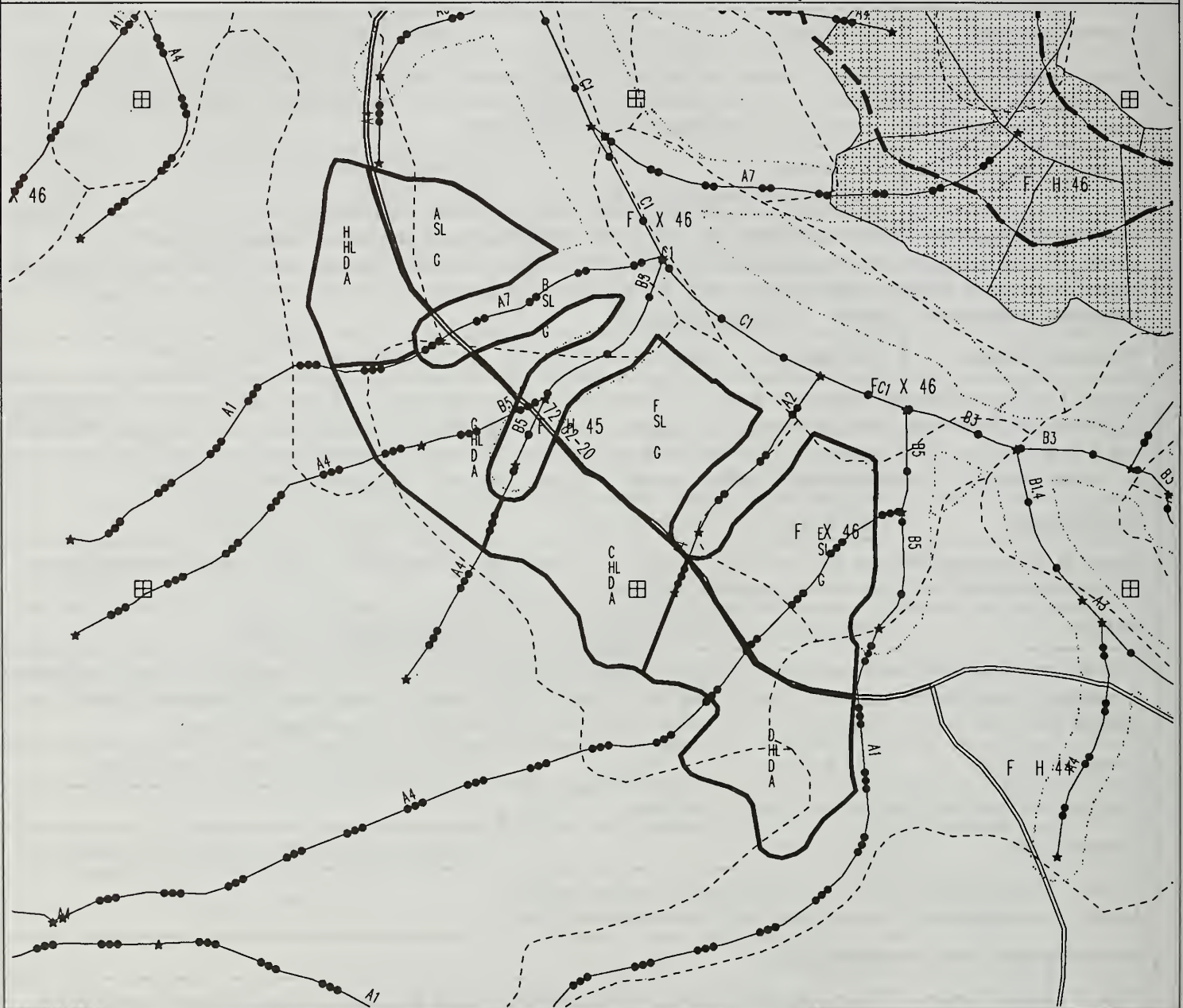
| | | | |
|---|---|---|--------------------------|
| VCU #: 595 | UNIT #: 419 | QUARTER QUAD: C3NW | PHOTO YR/#: 1991/690-197 |
| ACRES: 34.4 | VOL.: 1164.4 MBF | LOGGING SYSTEM: Swingyarder/Running Skyline | |
| LANDSCAPE ZONE: Located in the Steelhead Creek Drainage. | | | |
| Timber/Vegetation | Field Review: T. Stecher, 6/27/93 | Office Review: J. Goering | |
| Species composition predominantly hemlock but includes a small amount of spruce and cedar. Regeneration mostly on nurse logs and consists of hemlock. Poor regeneration in the upper elevations possibly due to the lack of nurse log material. Moderate to heavy amounts of stem decay evident in hemlock. | | | |
| Logging/Transportation | Field Review: E. DeWilde/K. Martin, 7/8/93 | Office Review: E. Urstadt | |
| This unit is accessed by USFS Road #2030-100. This road will be used as a continuous roadside landing for a swing yarder. Partial suspension is not required but is possible in the lower portions of the unit using a running skyline system. Final layout should include profiles to assure that the top (flat bench on east side) can be yarded. Do not partial cut. No blowdown problems are foreseen. Economics are good. | | | |
| Watershed/Fisheries | Field Review: E. Ablow, 6/24/93 | Office Review: T. Stewart | |
| Stream 1 (A7) is a Class III stream that is directly outside the northern boundary of the unit and Stream 4 is also a Class III stream that follows the southern boundary of the unit. Both are outside of the unit and are not of concern. Streams 2 and 3 both are Class III A7 streams. They flow through the center of the unit. Stream 3 may have an undersized culvert at the road crossing. Recommend split yarding Stream 3. Stream 2 is small drainage and has no concerns | | | |
| Soils/Geology | Field Review: E. Ablow, 6/24/93 | Office Review: T. Stewart | |
| Slopes in unit average between 40% and 65%. There are no indications of instability. There are rock outcroppings in the southwest corner that may be a regeneration concern. | | | |
| Wildlife | Field Review: H. Sloan, 6/24/93 | Office Review: M. Hall | |
| Unit in large previously unentered tract of old-growth; high percent of VC6. Level 1 snag retention. Goose observations in muskeg at south unit boundaries. Beaver pond east of unit. HCC's within 1/2 mile west and southeast of unit. Low wildlife use noted in unit. Retain Level 3 structure due to heavily harvested areas in proximity to unit. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit not seen from any priority travel route or use area. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Type A clearcut harvest. Where suspension allows, special attention should be given to saving advanced regeneration. Split yard Stream 3 bisecting unit. Mitigation measures for this unit are: F6, F8, W5, and W11. | | | |

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

VCU : 595

UNIT : 420

QUAD : C3-SW



- Revised Control Lake Project Boundary
- Post-Field Unit Boundary w/ Setting Codes
- Other Post-Field Unit Boundaries
- USFS Timber Types for Volc 4-7
- Eagle Tree Buffer of 330ft
- Existing & Rebuilt Roads
- F.S. Roads Under Construction
- Post-Field Proposed Roads
- Ahmu-Class 1 & Stream Chantypes
- Ahmu-Class 2 & Stream Chantypes
- Ahmu-Class 3 & Stream Chantypes
- Channel Type Change

- Lakes and Ponds
- Second Growth Units
- MMI 4
- McGilvery > 41
- Landings
- Stream & Lake NoCUT Buffers

May 16, 1994

.5 MILE

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

| | | | |
|---|---|--|----------------------|
| VCU #: 595 | UNIT #: 420 | QUARTER QUAD: C3SW | PHOTO YR/#: 1990-102 |
| ACRES: 60.1 | VOL.: 1861.7 MBF | LOGGING SYSTEM: Slackline with 100' Tower/Highlead | |
| LANDSCAPE ZONE: Unit is in Steelhead Creek drainage, southwest of Rio Roberts Watershed. | | | |
| Timber/Vegetation | Field Review: S. Karstens/J. Goering, 6/24/93 | Office Review: J. Goering | |
| Species composition predominantly hemlock with some cedar. Few spruce are present. Predominantly hemlock regeneration. Shallow soils overlying bedrock. Steep, rocky slope, relatively thin soils and exposed rock. Deep V-notches present in northern and southern portion composed of rocky soils and bedrock. Probable salmonberry incursions with soil/site disturbance based on existing high densities. Promote spruce and cedar regeneration through partial retention or shelterwood harvest. | | | |
| Logging/Transportation | Field Review: J. Doyal/E. Dewilde/J. Herzberg, 6/21/93 | Office Review: C. Barnhart | |
| Unit is accessed by Road #72-82-20. This road has difficult V-notch crossings. Recommend highlead downhill and slackline for uphill logging. The east boundary has a 200 foot stream buffer. Partial suspension can be achieved, but is not required. Partial cut is not feasible on downhill portion. Fair economics. | | | |
| Watershed/Fisheries | Field Review: J. Knutzen, 6/17/93 | Office Review: T. Stewart | |
| Split yard all Class III streams. Stream in most north area buffer to slope break in V-notch. Split yard V-notch streams or attain 100% suspension. Stream 4 needs upper 2/3 of selective cut below slope break to reduce soil disturbance. 25' buffer next 400' and possibly 100' buffer as this section may be Class I or II when flow returns. Make southeast stream unit boundary. Supply 200' buffer for northeast boundary stream. | | | |
| Soils/Geology | Field Review: J. Knutzen, 6/17/93 | Office Review: T. Stewart | |
| No concerns. Unit has gentle slopes and good stability. | | | |
| Wildlife | Field Review: H. Sloan, 6/17/93 | Office Review: M. Hall | |
| HCC units adjacent to unit (north to northeast) wetlands to the south. Level 2 structure. Moderate to heavy deer use. Bear use also evident. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit not seen from any priority travel route or use area. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Type A clearcut in downhill highlead settings, and Type G shelterwood in uphill slackline settings for regeneration and soil concerns. Maintain 100' buffers on both Class II streams in unit (not flagged field), and a 200' buffer on Class I stream along northeast boundary. Class I stream along south boundary requires a 100' no cut plus 50' selective cut buffer. Split yard all streams in unit. V-notch stream at north end requires harvesting to be limited to slope break. Class III stream in southern portion of unit requires selective cut below slope break. This stream should be reviewed prior to final layout and possibly upgraded to Class I or II. Mitigation measures for this unit are F5, F6, F7, F8, F10, W2, and W5. | | | |

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

VCU : 595

UNIT : 421

QUAD : C3-SW



- Revised Control Lake Project Boundary
- Post-Field Unit Boundary w/ Setting Codes
- Other Post-Field Unit Boundaries
- USFS Timber Types for Volc 4-7
- Eagle Tree Buffer of 330ft
- Existing & Rebuilt Roads
- F.S. Roads Under Construction
- Post-Field Proposed Roads
- Ahmu-Class 1 & Stream Chantypes
- Ahmu-Class 2 & Stream Chantypes
- Ahmu-Class 3 & Stream Chantypes
- Channel Type Change

- Lakes and Ponds
- Second Growth Units
- MMI 4
- McGilvery > 41
- Landings
- Stream & Lake NoCUT Buffers

May 16, 1994

0.5 MILE

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

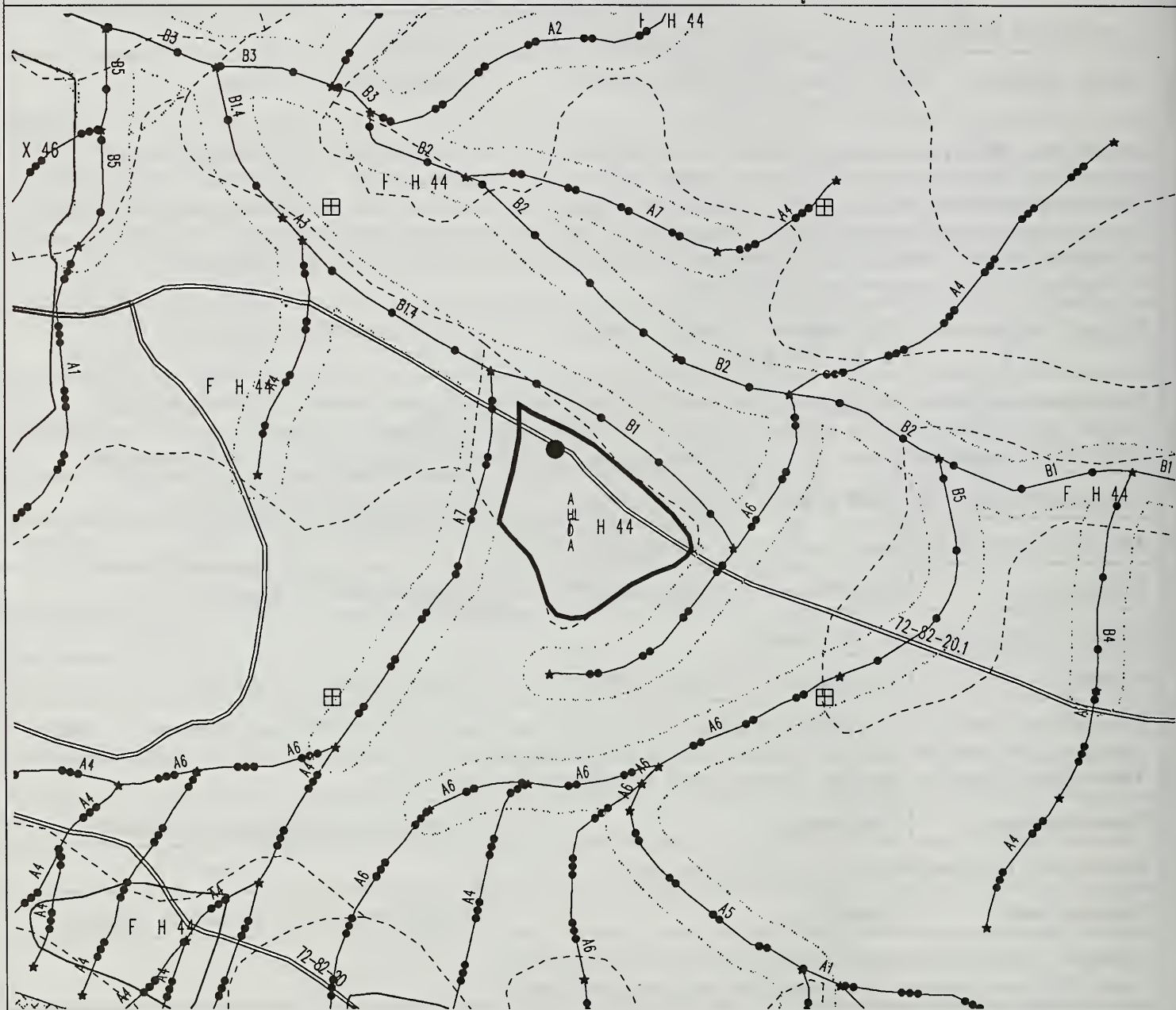
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|---|--|--|---------------------------|
| VCU #: 595 | UNIT #: 421 | QUARTER QUAD: C3SW | PHOTO YR/#: 1991/ 690-199 |
| ACRES: 32.6 | VOL.: 876.6 MBF | LOGGING SYSTEM: Swingyard/Running Skyline, Slackline w/ 70' Tower | |
| LANDSCAPE ZONE: Unit is in Upper Steelhead Drainage. | | | |
| Timber/Vegetation | Field Review: J. Miller/T. Stecher/ J. Goering, 6/23/93 | Office Review: J. Goering | |
| Species composition predominantly hemlock with some spruce. Few cedar are present. Predominantly hemlock regeneration. Some areas of moderately low volume, multi-canopy yellow-cedar with < 50% canopy closure. Fairly dense understory vegetation in low volume areas. Many small seeps and poor soil drainage areas mainly in the northeastern and upper-central portions. High erosive and sediment potential in northwest corner. Potentially increased by adjacent clearcut. Minimize soil compaction/displacement and avoid yarding over bog/muskeg areas. Promote spruce/cedar regeneration through planting. | | | |
| Logging/Transportation | Field Review: J. Doyal/J. Herzberg/ E. Dewilde, 6/25/93 | Office Review: M. Whitty | |
| Recommend swingyarder for western 2/3 of unit; 50% uphill/downhill; maximum distance is approximately 500'. Eastern 1/3, 70' tower with live skyline or slackline; 70% uphill and 30% downhill. Maximum distance is approximately 600'. Partial suspension in most of unit. This unit was laid out north of the planned location. Good economics. | | | |
| Watershed/Fisheries | Field Review: B. Romey, 6/21/93 | Office Review: T. Stewart | |
| 100' buffer on Class II streams of unit. Split yard remaining stream. | | | |
| Soils/Geology | Field Review: B. Romey, 7/24/93 | Office Review: T. Stewart | |
| Moderate slopes, stable soils; no concerns | | | |
| Wildlife | Field Review: B. Romey, 7/24/93 | Office Review: R. Fairbanks | |
| Deer and bear heavy use along south side of unit. Retain snags and greater than 12" DBH trees in streams for wildlife corridors. Tw- week-old wolf scat contained deer remains. Moderate deer use (fawn tracks) in unit. Bear sign evident. Yellow-bellied sapsucker identified. Retain Level 2 structure due to HCC's in area. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit not seen from any priority travel route or use area. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Type B clearcut to mitigate windthrow and wildlife concerns. Maintain 100' buffer on stream south of unit and split yard all others. Type I singletree selective in cedar snag patch. Mitigation measures for this unit are: F4, F5, F6, F8, and W4. | | | |

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

VCU : 595

UNIT : 422

QUAD : C3-SW



- Revised Control Lake Project Boundary
- Post-Field Unit Boundary w/ Setting Codes
- Other Post-Field Unit Boundaries
- USFS Timber Types for Volc 4-7
- Eagle Tree Buffer of 330ft
- Existing & Rebuilt Roads
- F.S. Roads Under Construction
- Post-Field Proposed Roads
- Ahmu-Class 1 & Stream Chantypes
- Ahmu-Class 2 & Stream Chantypes
- Ahmu-Class 3 & Stream Chantypes
- Channel Type Change

- Lakes and Ponds
- Second Growth Units
- MMI 4
- McGilvery > 41

- Landings
- Stream & Lake NoCUT Buffers

.5 MILE

May 16, 1994

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

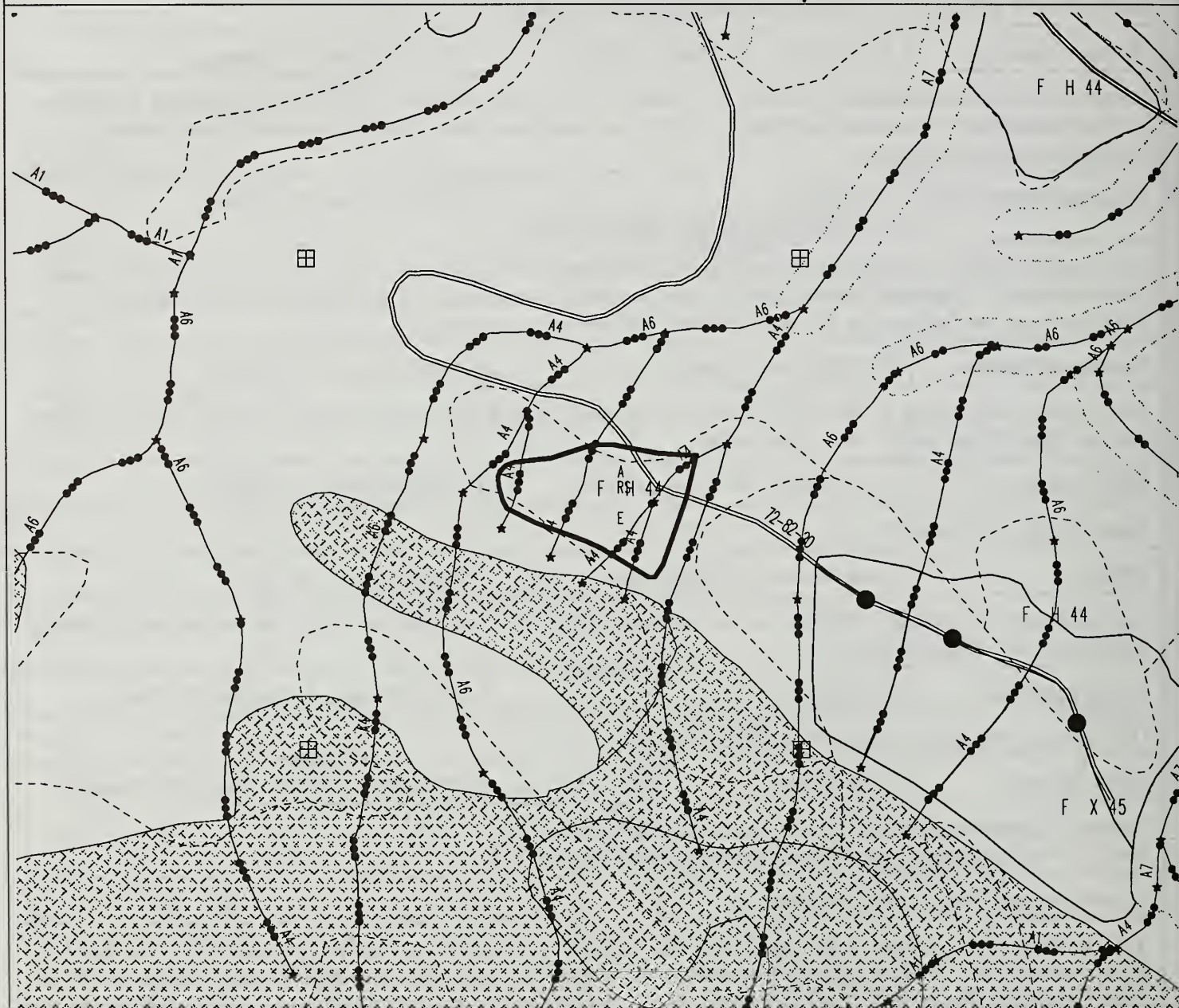
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|--|--|---|--------------------------|
| VCU #: 595 | UNIT #: 422 | QUARTER QUAD: C3SW | PHOTO YR/#: 1991/690-198 |
| ACRES: 8.7 | VOL.: 234.5 MBF | LOGGING SYSTEM: Highlead with 70' Tower | |
| LANDSCAPE ZONE: Unit is within the Steelhead Creek drainage. | | | |
| Timber/Vegetation | Field Review: B. Hasebe, 6/25/93 | Office Review: J. Goering | |
| Species composition predominantly hemlock but includes a few spruce and cedar. Predominantly hemlock regeneration. Lacking spruce and w. redcedar regeneration. Little to no mistletoe evident in canopy. Promote spruce/cedar regeneration through planting. | | | |
| Logging/Transportation | Field Review: J. Doyal/J. Herzberg/J. Spolar, 7/29/93 | Office Review: E. Urstadt | |
| Use a medium (70') tower with a slackline system. Maximum yarding distance is equivalent to 700' with 95% to be yarded downhill. A grabinski should achieve partial suspension, although it is not required. Do not partial cut. Blowdown may be a problem at the top of the unit. The economics are fair. | | | |
| Watershed/Fisheries | Field Review: R. Rogers, 6/21/93 | Office Review: T. Stewart | |
| Stream north of unit needs a 100' no-cut buffer with additional 100' selective harvest buffer. Streams west and within unit are Class III and need a 100' no-cut buffers. | | | |
| Soils/Geology | Field Review: R. Rogers, 6/21/93 | Office Review: T. Stewart | |
| Moderate slopes; no unstable soils. | | | |
| Wildlife | Field Review: G. Green, 6/21/93 | Office Review: M. Hall | |
| Unit surrounded by muskegs. High goose use - ten geese observed flying over unit. Wolf scat marker post in muskeg. Maintain Level 1 structure retention. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit not seen from any priority travel route or use area. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Type A clearcut. No streams within unit as laid out. Maintain 100' no cut and 100' selective cut buffer on Class I stream north of unit. Road as laid out goes through the selective harvest portion and possibly the no cut portion of this Class I stream at base of unit. Final unit layout should carefully review this road and consider moving it up on the slope as is now shown. This may make this unit feasible only for helicopter yarding. Maintain 100' buffer on stream west of unit, other buffered stream no longer adjacent to unit. Mitigation measures for this unit are: F5, F10, W5, and W11. | | | |

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

VCU : 595

UNIT : 423

QUAD : C3-SW



- Revised Control Lake Project Boundary
- Post-Field Unit Boundary w/ Setting Codes
- Other Post-Field Unit Boundaries
- USFS Timber Types for Volc 4-7
- Eagle Tree Buffer of 330ft
- Existing & Rebuilt Roads
- F.S. Roads Under Construction
- Post-Field Proposed Roads
- Ahmu-Class 1 & Stream Chantypes
- Ahmu-Class 2 & Stream Chantypes
- Ahmu-Class 3 & Stream Chantypes
- Channel Type Change

- Lakes and Ponds
- Second Growth Units
- MMI 4
- McGilvery > 41
- Landings
- Stream & Lake NoCUT Buffers

May 17, 1994

.5 MILE

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

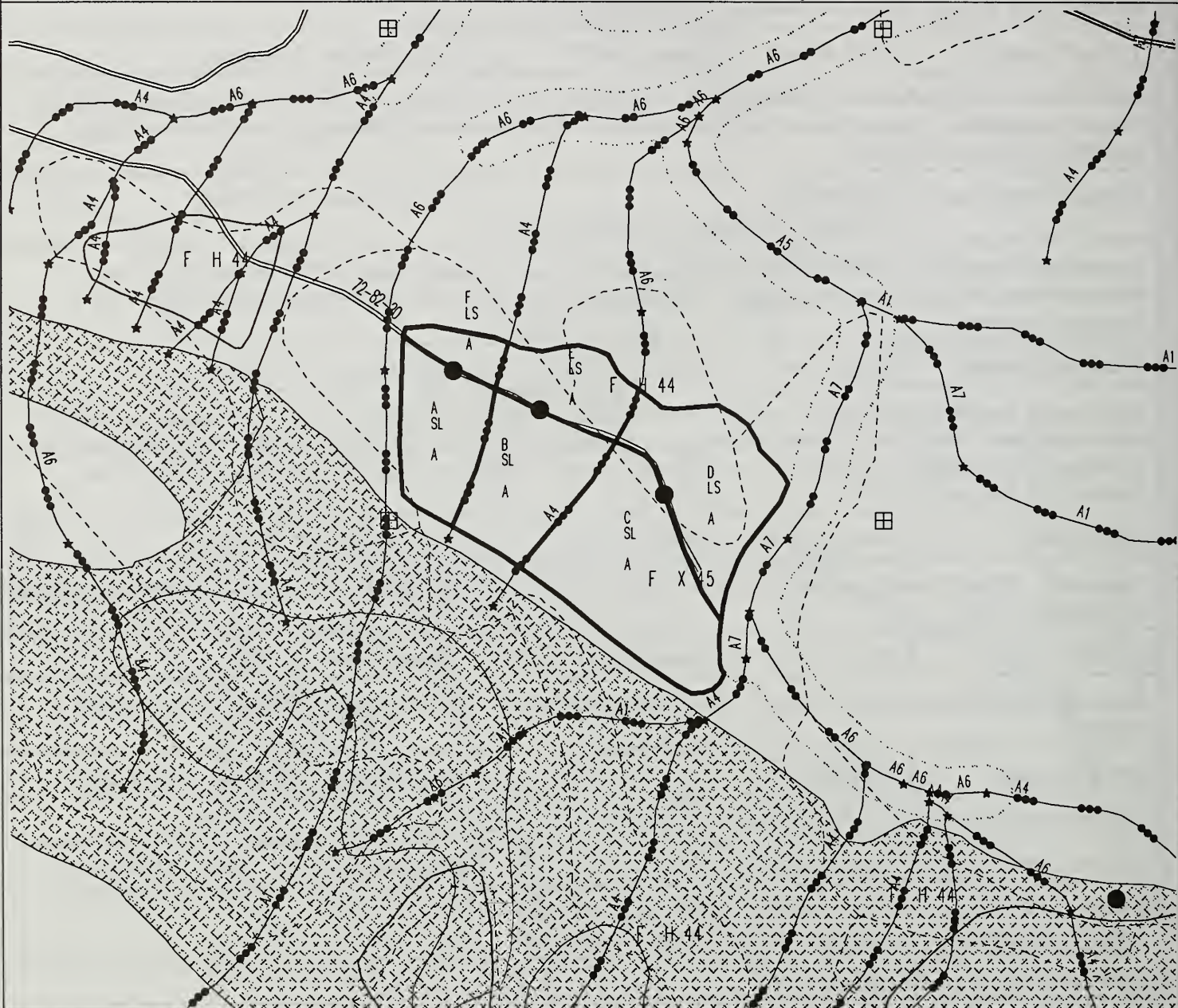
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|--|---|---|--------------------------|
| VCU #: 595 | UNIT #: 423 | QUARTER QUAD: C3SW | PHOTO YR/#: 1991/690-200 |
| ACRES: 6.2 | VOL.: 144.9 MBF | LOGGING SYSTEM: Swingyarder/Running Skyline | |
| LANDSCAPE ZONE: Unit in the Steelhead Creek drainage. | | | |
| Timber/Vegetation | Field Review: T. Stecher, 8/4/93 | Office Review: J. Goering | |
| Species composition predominantly hemlock with some cedar. Few to no spruce are present. Predominantly cedar and hemlock regeneration. Alaska yellow cedar decline evident. Good advanced regeneration (candidate for release) consisting of cedar and hemlock. | | | |
| Logging/Transportation | Field Review: J. Doyal/J. Herzberg/E. Dewilde, 6/23/93 | Office Review: M. Whitty | |
| Recommend swingyarder; 80% downhill and 20% uphill; maximum yarding distance is 500' on this 8 acre unit. Required partial suspension can be achieved. Guystumps for continuous road side landings require twisters. Poor economic feasibility. | | | |
| Watershed/Fisheries | Field Review: J. Knutzen, 6/14/93 | Office Review: T. Stewart | |
| Four streams need to be split yard or suspend. May consider moving east boundary in to second stream from east if cannot split yard. One Class III stream bisecting unit should be split yarded. Shallow V-notch. Two other small Class III streams to the east and west should be split yarded if practical. Fall trees away from the stream along the east boundary. (J. Metzler, 8/02/93) | | | |
| Soils/Geology | Field Review: J. Knutzen, 6/14/93 | Office Review: T. Stewart | |
| High MMI - Achieve partial suspension throughout unit. Retain nonmerchantable trees where practical for root strength. (J. Metzler, 8/02/93) | | | |
| Wildlife | Field Review: H. Sloan, 6/14/93 | Office Review: M. Hall | |
| Large muskegs along north unit boundary. Moderate to high deer use. Sapsucker heard. Retain level 1 structure retention. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit not seen from any priority travel route or use area. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Type E overstory removal while retaining nonmerchantable timber where logging feasibility allows. East and west tips of unit have small v-shaped areas of timber which should be retained if possible. Class III streams require directional falling and split yarding. Mitigation measures for this unit are: F1, F3, F6, F8, and W2. | | | |

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

VCU : 595

UNIT : 424

QUAD : C3-SW



- Revised Control Lake Project Boundary
- Post-Field Unit Boundary w/ Setting Codes
- Other Post-Field Unit Boundaries
- USFS Timber Types for Volc 4-7
- Eagle Tree Buffer of 330ft
- Existing & Rebuilt Roads
- F.S. Roads Under Construction
- Post-Field Proposed Roads
- Ahmu-Class 1 & Stream Chantypes
- Ahmu-Class 2 & Stream Chantypes
- Ahmu-Class 3 & Stream Chantypes
- Channel Type Change

- Lakes and Ponds
- Second Growth Units
- MMI 4
- McGilvery > 41
- Landings
- Stream & Lake NoCUT Buffers

May 17, 1994

0.5 MILE

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

| | | | |
|---|---|---|--------------------------|
| VCU #: 595 | UNIT #: 424 | QUARTER QUAD: C3SW | PHOTO YR/#: 1991/690-200 |
| ACRES: 31.6 | VOL.: 849.3 MBF | LOGGING SYSTEM: Slackline System/(Shotgun) Live Skyline | |
| LANDSCAPE ZONE: Unit is located in Steelhead Creek Drainage. | | | |
| Timber/Vegetation | Field Review: G. Hedin/J. Boyce, 7/8/93 | Office Review: J. Goering | |
| Species composition includes hemlock, spruce, and cedar. Predominantly hemlock regeneration. Regeneration concerns due to shallow rocky soils, high elevation site, and areas of poor regeneration. Rock bluffs on the higher elevations of the unit. Steep, rocky, shallow soils and exposed rock. Alaska yellow cedar decline evident. | | | |
| Logging/Transportation | Field Review: J. Doyal/J. Herzberg/E. Dewilde, 6/26/93 | Office Review: M. Whitty | |
| Recommend tower with slackline system; 75% downhill and 25% uphill yarding. Required partial suspension is achievable. Northwest part of unit inaccessible, needs helicopter logging (approximately 4 acres). The upper boundary should be lowered to 960' due to soils and the unit extended to the northwest to include more timber. Good economic feasibility. | | | |
| Watershed/Fisheries | Field Review: J. Knutzen, 6/16/93 | Office Review: T. Stewart | |
| Boundary lower part of east boundary stream, move boundary of this stream to slope break as is very steep. Class IIb stream is outside of unit, near southeast boundary. Retain trees within 70' to 100' of this large stream. Two small, Class III tributaries near center of unit should be split yarded if practical. Fall trees away from the stream along the northwest boundary. (J. Metzler 7/31/93) | | | |
| Soils/Geology | Field Review: J. Knutzen, 6/16/93 | Office Review: T. Stewart | |
| Due to upper steep slope and cliffs recommend moving boundary to below cliffs, or fully suspend, or helicopter log upper area. Very high MMI soils above 960' elevation should be excluded from unit. Achieve partial suspension in remainder of unit due to high MMI. (J. Metzler 7/31/93) | | | |
| Wildlife | Field Review: H. Sloan, 6/16/93 | Office Review: M. Hall | |
| High deer use throughout unit. Maintain Level 1 structure retention. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit not seen from any priority travel route or use area. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Type A clearcut. Reflag upper unit boundary to the bluffs at 960' elevation. Maintain 100' buffer on Class II stream to east. Partial suspension can be achieved in lower unit by using a slackline system with tail trees along top of bluff. Mitigation measures for this unit are: F1, F3, F5, F6, F8, and W5. | | | |

NO UNIT MAP

UNIT DROPPED OR DEFERRED

| | | | |
|---|---|---|--------------------------|
| VCU #: 595 | UNIT #: 425 | QUARTER QUAD: C3SW | PHOTO YR/#: 1991/595-425 |
| ACRES: | VOL.: | LOGGING SYSTEM: | |
| LANDSCAPE ZONE: | | | |
| Timber/Vegetation | Field Review: | Office Review: | |
| | | | |
| Logging/Transportation | Field Review: J. Doyal/J. Herzberg/E. Dewilde, 6/26/93 | Office Review: M. Whitty, 9/14/93 | |
| Accessed by Road #72-82-20. Unit was dropped by J. Metzler due to MMI4 soils. | | | |
| Watershed/Fisheries | Field Review: J. Knutzen, 6/16/93 | Office Review: | |
| No streams, no concerns. | | | |
| Soils/Geology | Field Review: J. Metzler, 7/31/93 | Office Review: | |
| Unit dropped due to very high MMI soils throughout unit. | | | |
| Wildlife | Field Review: H. Sloan, 6/16/93 | Office Review: M. Hall | |
| No concerns. Level 1 structure retention. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit not seen from any priority travel route or use area. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Unit dropped due to very high MMI soils throughout unit. | | | |

NO UNIT MAP
UNIT DROPPED OR DEFERRED

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

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|---|--|-----------------------------|---|
| VCU #: 595 | UNIT #: 427 | QUARTER QUAD: C3SW | PHOTO YR/#: 1991/990-31 |
| ACRES: | VOL.: | LOGGING SYSTEM: Swingyarder | |
| LANDSCAPE ZONE: | | | |
| Timber/Vegetation | Field Review: S. Karstens, 7/7/93 | | Office Review: J. Goering |
| Species composition predominantly hemlock with some cedar. Few spruce are present. Regeneration mostly on nurse logs and consists of hemlock. Lacking spruce and cedar regeneration. Rock outcrops, steep slopes, thin and rocky soils present. Erosive potential due to slope. Light windthrow damage present in middle portion of unit. | | | |
| Logging/Transportation | Field Review: B. Webster/ G. Slawson/T. Wetzel, 7/06/93 | | Office Review: M. Whitty, 9/14/93 |
| Recommend swingyarder with grapple. 80% uphill and 20% downhill yarding; maximum yarding distance is 600' with good suspension (not required) except on northern corner. Good economic feasibility. | | | |
| Watershed/Fisheries | Field Review: B. Romey, 8/02/93 | | Office Review: |
| Streams 1 and 2 are Class III - O/W, split yard, directional fall . | | | |
| Soils/Geology | Field Review: B. Romey, 8/02/93 | | Office Review: |
| Steep slopes, stable soils. | | | |
| Wildlife | Field Review: M. Minnillo, 8/02/93 | | Office Review: M. Hall |
| Heavy deer activity on upper ridge in muskeg; well worn trails. Woodpecker audible. Low to moderate deer use throughout unit. Retain Level 1 structure. | | | |
| Visual/Recreation | Field Review: | | Office Review: S. Bedross, M. Greenig |
| Unit not seen from any priority travel route or use area. Seen from Big Salt Lake in Middleground. Maximum Modification VQO. CVD problems? | | | |
| Cultural/Lands | Field Review: | | Office Review: T.W. Greiser, M. Greenig |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Unit deferred - adjacent to recent clearcut harvest on private land along the immediate west boundary. | | | |

NO UNIT MAP

UNIT DROPPED OR DEFERRED

| | | | |
|--|----------------------------------|---------------------------------------|-------------|
| VCU #: 595 | UNIT #: 428 | QUARTER QUAD: C3SW | PHOTO YR/#: |
| ACRES: | VOL.: | LOGGING SYSTEM: | |
| LANDSCAPE ZONE: | | | |
| Timber/Vegetation | Field Review: J. Boyce 6/16/93 | Office Review: | |
| Understory conifers regeneration is lacking. Rock overlaps and heavy brush composition dominate the ground cover. Adequate conifer regeneration is not expected within 5 years if the overstory is removed. See soils. | | | |
| Logging/Transportation | Field Review: | Office Review: | |
| | | | |
| Watershed/Fisheries | Field Review: T. Stewart 6/16/93 | Office Review: | |
| Numerous streams in unit are flowing over bedrock - the sediment has been swept away in debris avalanches. More shallowly incised than B4 channels but it is closest. Unit is extremely unstable see soils. | | | |
| Soils/Geology | Field Review: T. Stewart 6/16/93 | Office Review: | |
| This unit has enumerable debris chutes, debris avalanches, snow avalanche tracks, devils club in between trees; snowy wetness. Vertical rock faces to 400' +. This entire unit is MMI4 and should be dropped from the CFL base. Slopes are 70% vertical. | | | |
| Wildlife | Field Review: B. Rogers, 8/02/93 | Office Review: | |
| Heavy deer activity on upper ridge in muskeg. Low - moderate deer throughout. Snag retention level 1. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit not seen from any priority travel route or use area. | | | |
| Cultural/Lands | Field Review: | Office Review: | |
| | | | |
| Interdisciplinary Team Recommendations | | | |
| Dropped. | | | |

NO UNIT MAP
UNIT DROPPED OR DEFERRED

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

| | | | |
|--|-----------------------------------|---------------------------------------|---------------------|
| VCU #: 595 | UNIT #: 429 | QUARTER QUAD: C3SW | PHOTO YR/#: (blank) |
| ACRES: | VOL.: | LOGGING SYSTEM: | |
| LANDSCAPE ZONE: | | | |
| Timber/Vegetation | Field Review: J. Boyce 6/15/93 | Office Review: | |
| High elevation unit (1000-1800 feet) with unstable soils. Understory conifer region is lacking. Canopy gaps show a high density of brush composition. Adequate conifer regeneration is not expected within 5 years if the overstory is removed. See soils. | | | |
| Logging/Transportation | Field Review: | Office Review: | |
| | | | |
| Watershed/Fisheries | Field Review: T. Stewart, 8/02/93 | Office Review: | |
| Numerous streams in unit are flowing over bedrock indicating that sediment has been washed away in debris avalanches. Channel types are similar to A4 but more shallowly or not incised. Unit is extremely unstable - See soils. | | | |
| Soils/Geology | Field Review: T. Stewart, 8/02/93 | Office Review: | |
| Unit has numerous debris avalanches, debris chutes, snow avalanche, tracks, devil's club W/I trees showing wet areas of soils and extra potential for instability. Vertical rock fences from 200 to 400' high. This entire unit is MMI4 and should be dropped from CFL base. Slopes are 70% to vertical. | | | |
| Wildlife | Field Review: B. Rogers, 8/02/93 | Office Review: | |
| Heavy deer activity on upper ridge in muskeg. Low - moderate deer throughout. Snag retention level 1. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit not seen from any priority travel route or use area. | | | |
| Cultural/Lands | Field Review: | Office Review: | |
| | | | |
| Interdisciplinary Team Recommendations | | | |
| Dropped. | | | |

NO UNIT MAP
UNIT DROPPED OR DEFERRED

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

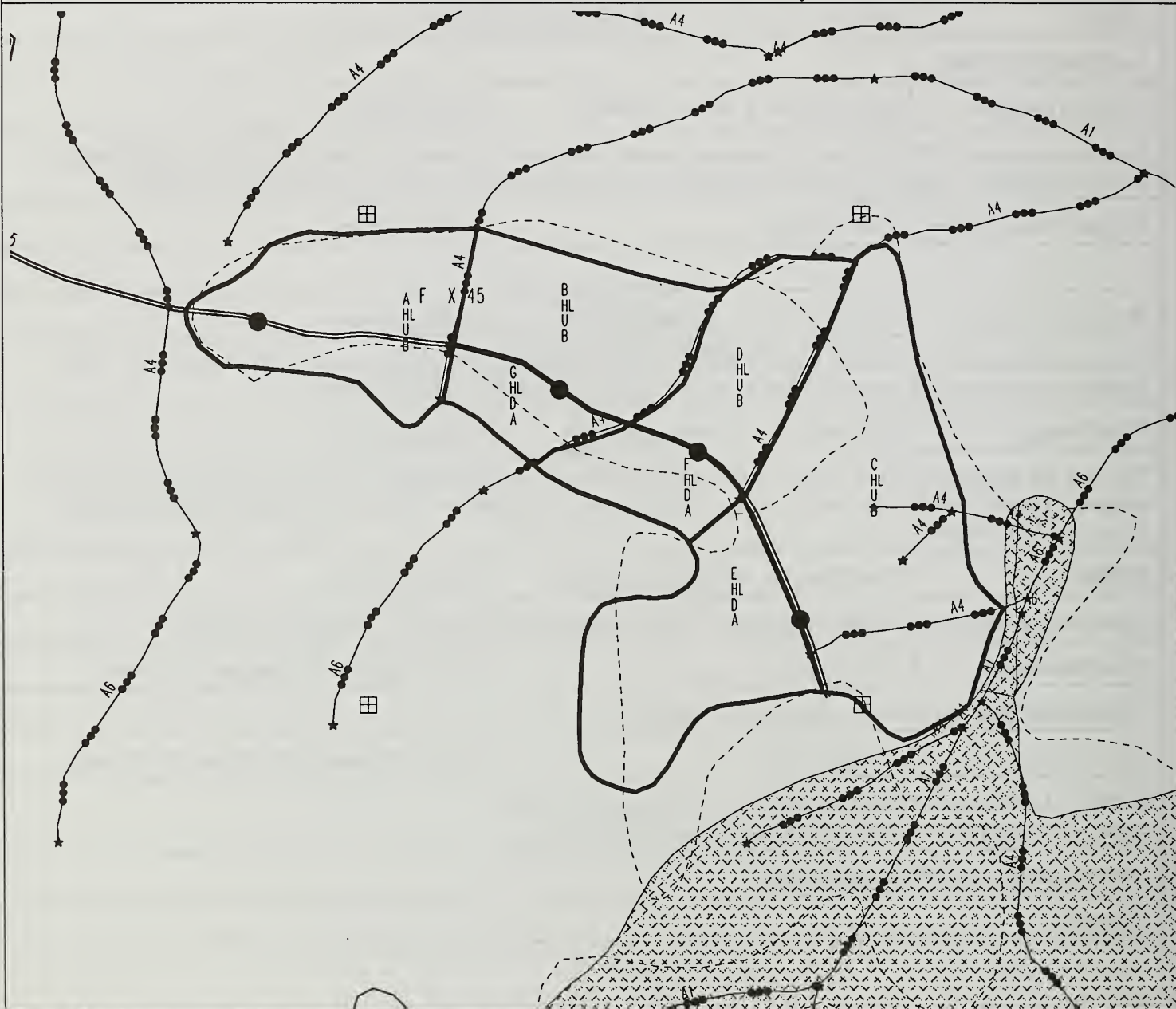
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|--|-----------------------------------|---|-------------------------|
| VCU #: 595 | UNIT #: 430 | QUARTER QUAD: C3NW | PHOTO YR/#: None listed |
| ACRES: | VOL.: | LOGGING SYSTEM: | |
| LANDSCAPE ZONE: | | | |
| Timber/Vegetation | Field Review: J. Boyce , 6/18/93 | Office Review: | |
| High elevation unit, 1000-2100 feet. Understory conifer regeneration is lacking. Canopy gaps show a high density of brush composition. Adequate conifer regeneration is not expected within 5 years if the overstory is removed. | | | |
| Logging/Transportation | Field Review: | Office Review: | |
| | | | |
| Watershed/Fisheries | Field Review: T. Stewart, 6/16/93 | Office Review: | |
| Numerous streams in unit are flowing over bedrock - the sediment has been swept away in debris avalanches. More shallowly incised than B4 channels but it is closest. Unit is extremely unstable see soils. | | | |
| Soils/Geology | Field Review: T. Stewart, 6/16/93 | Office Review: | |
| This unit has enumerable debris chutes, debris avalanches, snow avalanche tracks, devils club in between trees; snowy wetness. Vertical rock faces to 400' or more. This entire unit is MMI4 and should be dropped from the CFL base. Slopes are 70% vertical. | | | |
| Wildlife | Field Review: B. Rogers, 8/02/93 | Office Review: | |
| Heavy deer activity on upper ridge in muskeg. Low - moderate deer throughout. Snag retention level 1. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit not seen from any priority travel route or use area. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Dropped. | | | |

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

VCU : 595

UNIT : 431

QUAD : C3-SW



- Revised Control Lake Project Boundary
- Post-Field Unit Boundary w/ Setting Codes
- Other Post-Field Unit Boundaries
- USFS Timber Types for Volc 4-7
- Eagle Tree Buffer of 330ft
- Existing & Rebuilt Roads
- F.S. Roads Under Construction
- Post-Field Proposed Roads
- Ahmu-Class 1 & Stream Chantypes
- Ahmu-Class 2 & Stream Chantypes
- Ahmu-Class 3 & Stream Chantypes
- Channel Type Change

- Lakes and Ponds
- Second Growth Units
- MMI 4
- McGilvery > 41
- Landings
- Stream & Lake NoCUT Buffers

.5 MILE

May 17, 1994

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

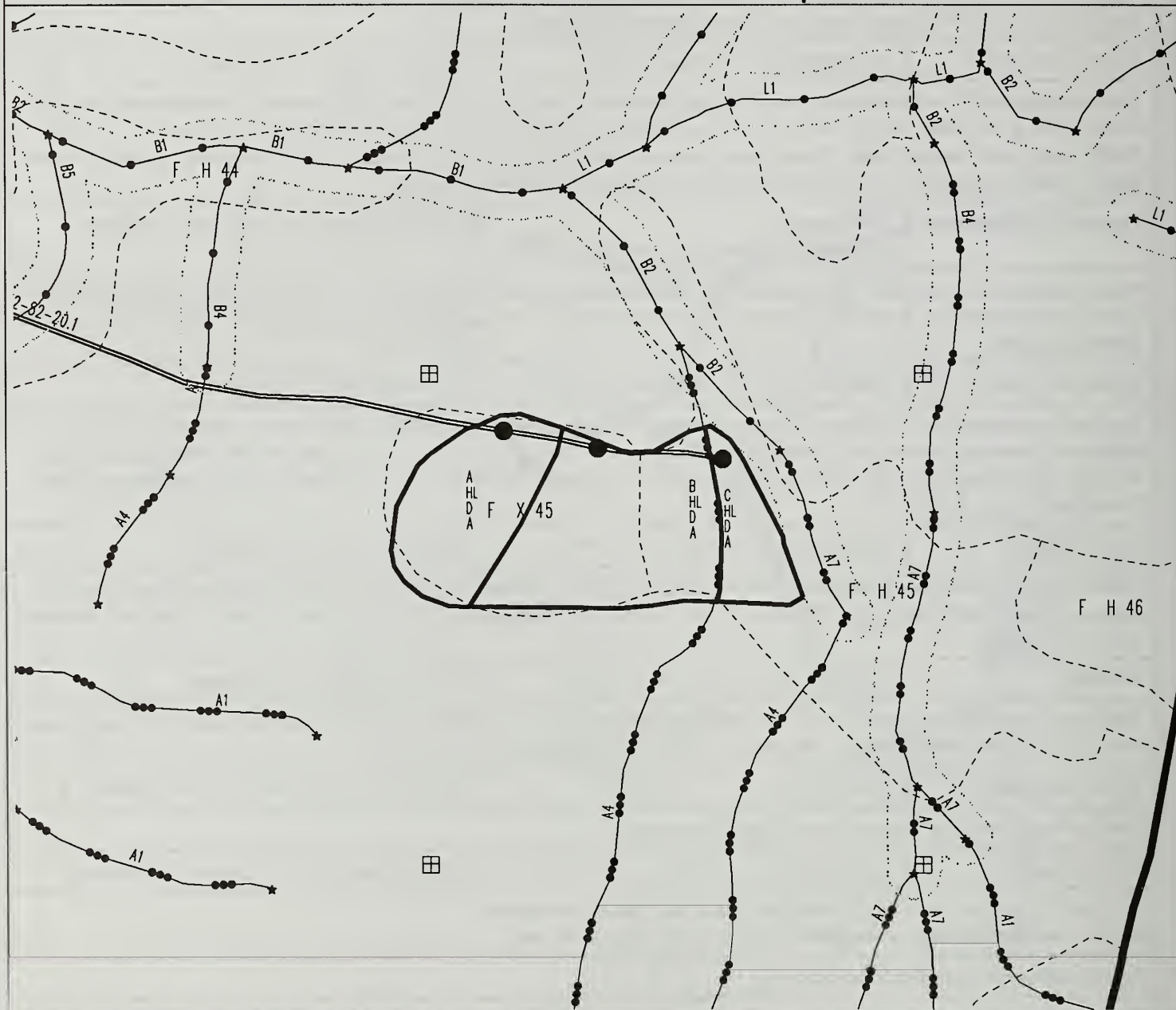
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|---|--|---|-------------------------------|
| VCU #: 595 | UNIT #: 431 | QUARTER QUAD: C3SW | PHOTO YR/#: 1991/990-102, 103 |
| ACRES: 84.6 | VOL.: 3024.3 MBF | LOGGING SYSTEM: Highlead | |
| LANDSCAPE ZONE: Unit located in Upper Steelhead Drainage. | | | |
| Timber/Vegetation | Field Review: M. Case, 7/7/93 | Office Review: J. Goering | |
| Species composition predominantly hemlock and cedar with a few spruce present. Regeneration predominantly hemlock but includes a few cedar and spruce. Low to moderate amounts of mistletoe infection evident in canopy. Steep, rocky, and shallow soils. Many small streams, and poor soil drainage areas. Low to moderate amounts of stem decay evident in hemlock. Promote spruce/cedar regeneration through planting. | | | |
| Logging/Transportation | Field Review: J. Doyal/J. Herzberg/D. Deister, 7/06/93 | Office Review: C. Barnhart/M. Whitty | |
| Partial suspension is available with large tower and slackline system (not required), otherwise highlead. Split settings at Class III streams where possible. A partial cut may be feasible. Accessed by Road #72-82-19.5. 70% uphill and 30% downhill yarding. | | | |
| Watershed/Fisheries | Field Review: G. Jackson, 6/29/93 | Office Review: T. Stewart | |
| The unit is dissected by five Class III streams, each of which occupies a V-notch. Three of the streams are in the southeast corner of the unit, while another bisects the unit, running southwest to northeast, and the other runs the same direction and is located in the western third of the unit. Harvest should only be to the break in slope at the top of the V-notches. | | | |
| Soils/Geology | Field Review: G. Jackson, 6/29/93 | Office Review: T. Stewart | |
| Gentle to moderate slopes throughout most of unit. Northeast side has terrain up to 100% in slope and two V-notch streams. Recommend excluding this area. Most of what was mapped as MMI4 soil does not have a very high potential for mass wasting. | | | |
| Wildlife | Field Review: C. Confer, 6/29/93 | Office Review: R. Fairbanks | |
| Two black bear seen in muskeg south of southwest unit boundary. Sandhill crane heard north of unit. Structure retention level 2. Murrelet survey with no detections. Goshawk survey with no detections. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit not seen from any priority travel route or use area. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Type A clearcut above (south of the road). Type B clearcut with retention of diversity of all species and diameter classes along the lower portion of the unit boundary. Retain approximately 50% of the basal area in groups between yarding corridors along the bottom 15' to 200' from flagged unit boundary. This will help provide structure within this heavily harvested drainage. Split yard all streams in unit. Mitigation measures for this unit are: F6, F7, F8, W4 (below road), W5 (above road), and W11. | | | |

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

VCU : 595

UNIT : 433

QUAD : C3-SW



- Revised Control Lake Project Boundary
- Post-Field Unit Boundary w/ Setting Codes
- Other Post-Field Unit Boundaries
- USFS Timber Types for Volc 4-7
- Eagle Tree Buffer of 330ft
- Existing & Rebuilt Roads
- F.S. Roads Under Construction
- Post-Field Proposed Roads
- Ahmu-Class 1 & Stream Chantypes
- Ahmu-Class 2 & Stream Chantypes
- Ahmu-Class 3 & Stream Chantypes
- Channel Type Change

- Lakes and Ponds
- Second Growth Units
- MMI 4
- McGillvery > 41
- Landings
- Stream & Lake NoCUT Buffers

.5 MILE

May 17, 1994

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

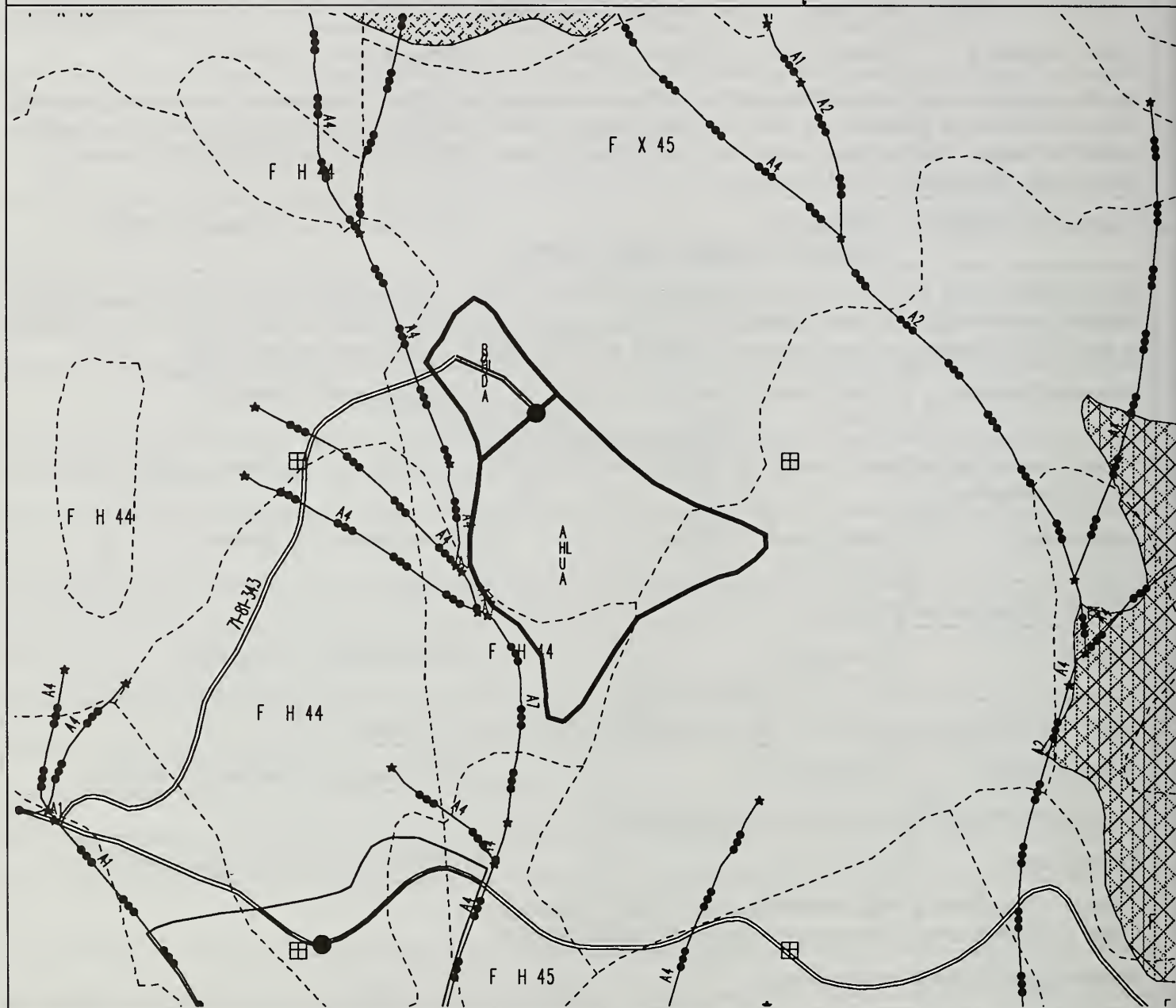
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|--|--|---|--------------------------|
| VCU #: 595 | UNIT #: 433 | QUARTER QUAD: C3SW | PHOTO YR/#: 1991/690-199 |
| ACRES: 23.6 | VOL.: 958.5 MBF | LOGGING SYSTEM: Highlead with 70' Tower | |
| LANDSCAPE ZONE: Unit located in Upper Steelhead Creek Drainage and within 1/2 mile of Karta Wilderness Area. | | | |
| Timber/Vegetation | Field Review: B. Hasebe, 7/2/93 | Office Review: J. Goering | |
| Species composition predominantly hemlock but includes some spruce and cedars. Regeneration predominantly hemlock with a few spruce but is lacking red cedar and yellow cedar. Alaska yellow cedar decline evident. Little to no mistletoe evident in canopy. Lacking spruce and western redcedar regeneration. Shallow soils overlying bedrock. Promote spruce/cedar regeneration through planting. | | | |
| Logging/Transportation | Field Review: J. Doyal/J. Herzberg/J. Spolar, 6/29/93 | Office Review: C. Barnhart/M. Whitty | |
| East boundary placed on Class III stream and Class II TTRA 100' buffer. 80% downhill logging, partial suspension is possible; however highlead more economical and is recommended. One landing located in muskeg; may require twistlers or need artificial anchors for some guylines. Accessed by Rd #72-82-20.1. Fair economic feasibility. | | | |
| Watershed/Fisheries | Field Review: B. Romey, 6/21/93, 7/24/93 | Office Review: T. Stewart | |
| Stream 1 east of unit is Class II - needs 100' buffer. Stream 2 within unit is Class III - flag O/W, split yard, directional fall, full suspension. | | | |
| Soils/Geology | Field Review: B. Romey, 6/21/93, 7/24/93 | Office Review: T. Stewart | |
| Moderate slopes, no unstable soils. | | | |
| Wildlife | Field Review: G. Green/B. Romey, 7/24/93 | Office Review: R. Fairbanks | |
| Heavy bear and deer use in lower part of unit (north side). Retain Level 1 structure. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit not seen from any priority travel route or use area. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Type A clearcut. Maintain 100' buffer on Class II stream east of unit. Split yard Class III stream within unit. Mitigation measures for this unit are: F5, F6, F8, F10, and W5. | | | |

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

VCU : 595

UNIT : 434

QUAD : C3-NW



- | | | | |
|--|---|--|-----------------------------|
| | Revised Control Lake Project Boundary | | Lakes and Ponds |
| | Post-Field Unit Boundary w/ Setting Codes | | Second Growth Units |
| | Other Post-Field Unit Boundaries | | MMI 4 |
| | USFS Timber Types for Volc 4-7 | | McGilvery > 41 |
| | Eagle Tree Buffer of 330ft | | Landings |
| | Existing & Rebuilt Roads | | Stream & Lake NoCUT Buffers |
| | F.S. Roads Under Construction | | |
| | Post-Field Proposed Roads | | |
| | Ahmu-Class 1 & Stream Chantypes | | |
| | Ahmu-Class 2 & Stream Chantypes | | |
| | Ahmu-Class 3 & Stream Chantypes | | |
| | Channel Type Change | | |

March 17, 1995

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

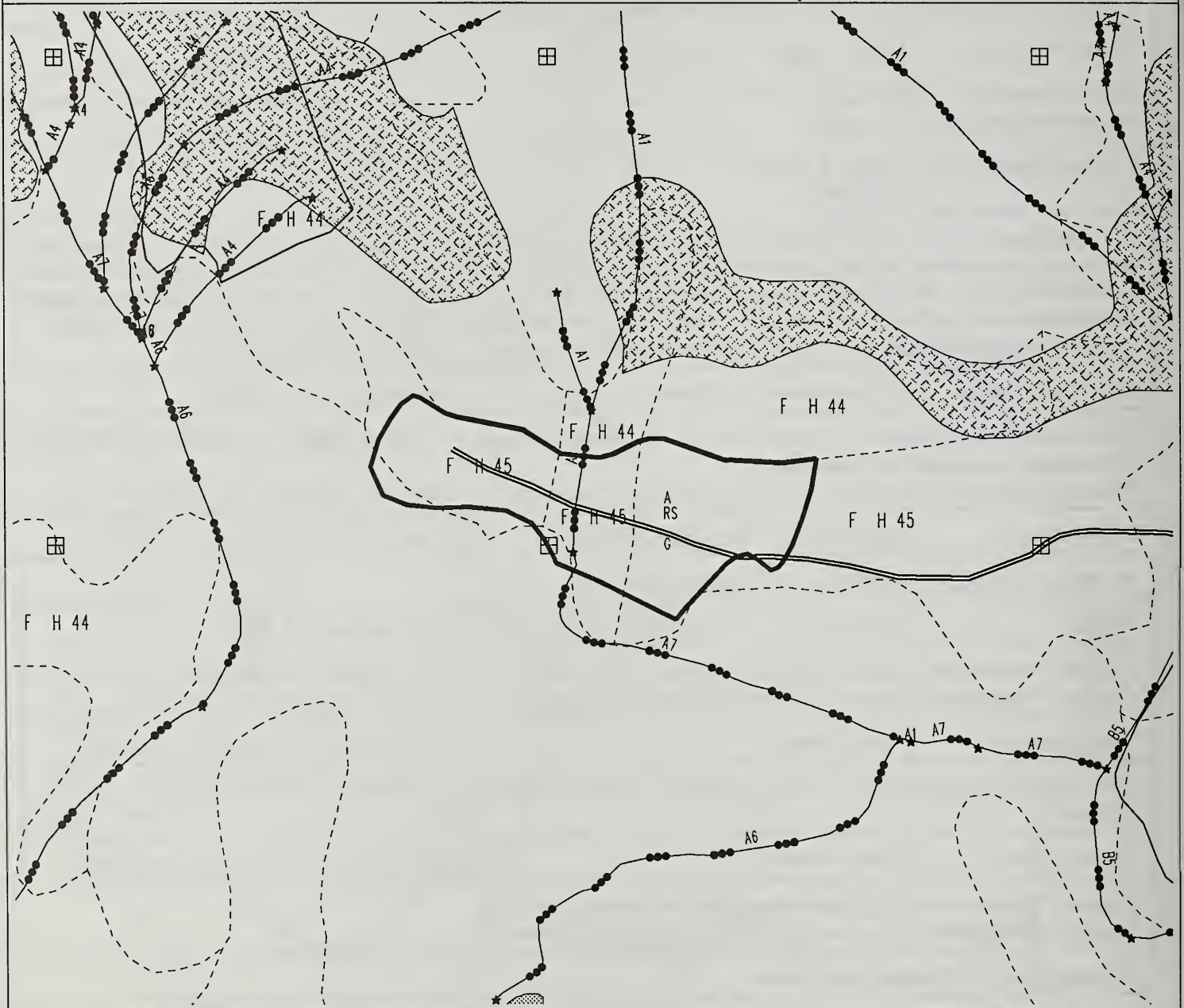
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|---|---|---|--------------------------|
| VCU #: 595 | UNIT #: 434 | QUARTER QUAD: C3NW | PHOTO YR/#: 1991/890-131 |
| ACRES: 21.9 | VOL.: 670.6 MBF | LOGGING SYSTEM: Highlead with 70' Tower | |
| LANDSCAPE ZONE: Unit is within the Kogish Mountain Corridor north of Big Salt Lake. | | | |
| Timber/Vegetation | Field Review: T. Stecher, 7/30/93 | Office Review: J. Goering | |
| Species composition predominantly hemlock but includes cedar and some spruce. Regeneration predominantly hemlock but includes some cedar and spruce. | | | |
| Logging/Transportation | Field Review: E. Urstadt/J. Herzberg, 8/09/93 | Office Review: M. Whitty, 9/14/93 | |
| Use a medium (70') tower with a highlead system. Maximum yarding distance is approximately 1,300'. There are no suspension requirements, although partial suspension is achievable on 75% of unit. Partial cut not recommended due to potential blowdown. Recommend feathering northwest and northeast boundaries by leaving nonmerchantable and small merchantable trees within 50' of boundary. Much of the unit was excluded due to infeasible split yard requirements. Potential helicopter logging area. Unit could be expanded to northeast. Good economic feasibility. | | | |
| Watershed/Fisheries | Field Review: R. Rogers, 7/21/93 | Office Review: T. Stewart | |
| Two streams in west portion of unit are Class III - directional fall, split yard, leave all non-merchantable, wind firm trees in V-notches (in original unit paper plan). Stream in the mid-western portion of unit (original paper plan location) is Class III - directional fall, split yard. | | | |
| Soils/Geology | Field Review: R. Rogers, 7/21/93 | Office Review: T. Stewart | |
| No special concerns; no instability noted away from streams. | | | |
| Wildlife | Field Review: D. Crowe, 7/21/93 | Office Review: M. Hall | |
| Structure retention per watershed/fisheries concerns would maintain cover for high deer and bear use area in unit; Level 2 retention. Bald eagle detection. Retention level will be met by retaining area west of unit between streams. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit in timber production LUD. Seen from Big Salt Lake in Middleground. Maximum Modification VQO. CVD problems? | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Type A clearcut due to windthrow potential. Unit boundary moved to the east to comply with split yarding requirements of streams that could not be met with current logging systems. Retain non-merchantable timber along v-notch areas of west stream. Mitigation measures for this unit are: F6, F7, F8, and W5. | | | |

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

VCU : 596

UNIT : 401

QUAD : C3-NW.



- Revised Control Lake Project Boundary
- Post-Field Unit Boundary w/ Setting Codes
- Other Post-Field Unit Boundaries
- USFS Timber Types for Volc 4-7
- Eagle Tree Buffer of 330ft
- Existing & Rebuilt Roads
- F.S. Roads Under Construction
- Post-Field Proposed Roads
- Ahmu-Class 1 & Stream Chantypes
- Ahmu-Class 2 & Stream Chantypes
- Ahmu-Class 3 & Stream Chantypes
- Channel Type Change

- Lakes and Ponds
- Second Growth Units
- MMI 4
- McGilvery > 41
- Landings
- Stream & Lake NoCUT Buffers

.5 MILE

May 17, 1994

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

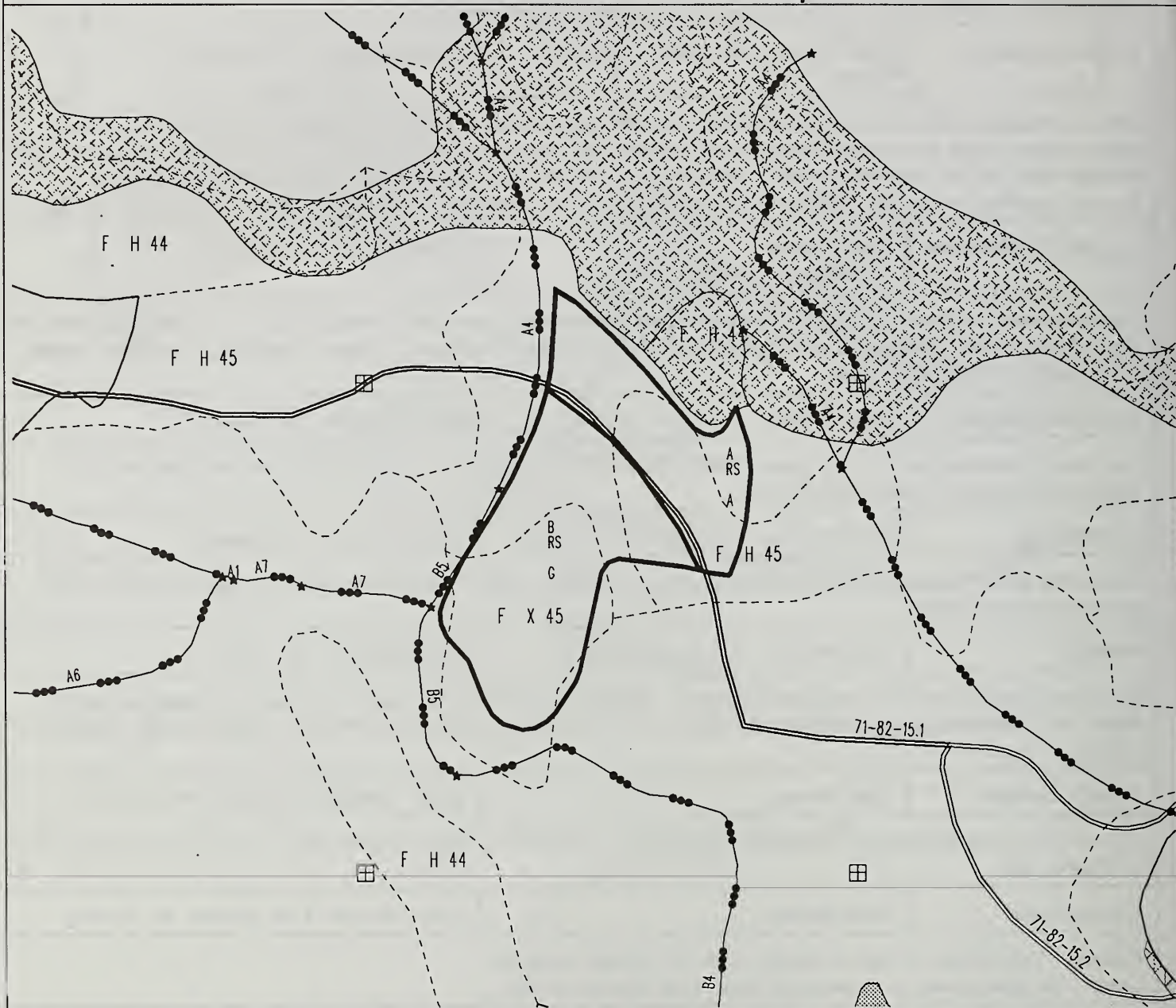
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|--|--|---|-------------------------|
| VCU #: 596 | UNIT #: 401 | QUARTER QUAD: C3NW | PHOTO YR/#: 1991/990-93 |
| ACRES: 18.4 | VOL.: 543.8 mbf | LOGGING SYSTEM: Running Skyline | |
| LANDSCAPE ZONE: Unit located partially in the Honker Divide watershed. | | | |
| Timber/Vegetation | Field Review: B. Hedin/J. Goering, 7/5/93 | Office Review: J. Goering | |
| Species composition predominantly hemlock but includes some spruce and cedar. Regeneration concerns due to steep slope, shallow rocky soils, high elevation snow damage, and the presence of salmonberry in north half. Some poor soil drainage areas on the southwest portion. Consider partial retention harvest on upper slopes and southeast corner to promote regenerative success. Minimize soil compaction on the southern flat. Recommend partial suspension yarding. | | | |
| Logging/Transportation | Field Review: B. Webster/T. Wetzel, 7/05/93 | Office Review: E. Urstadt | |
| Unit is accessed by Road #71-82-15.1. Recommend a large swing yarder with running skyline. The north boundary was placed below bluffs. Ninety percent of yarding is uphill. Economics are good. Partial suspension is possible. Partial cut is feasible. Good economics. | | | |
| Watershed/Fisheries | Field Review: J. Metzler, 7/01/93 | Office Review: T. Stewart | |
| One Class III stream (with 2 forks at top of unit) flows south through unit. Directional fall and split yard away to minimize disturbance of inner gorge slopes. | | | |
| Soils/Geology | Field Review: J. Metzler, 7/01/93 | Office Review: T. Stewart | |
| High MMI soils - get at least partial suspension throughout unit. Bluffs and shallow soils above approximately 1,800' - put top line below these. | | | |
| Wildlife | Field Review: S. Tanguay, 7/01/93 | Office Review: M. Hall | |
| Heavy bear use in lower unit; large bear observed. Keep unit boundary away from lower muskeg. Most bear use in lower unit. Maintain Level 2 structure retention due to unit affecting small old-growth area within naturally fragmented matrix. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit not seen from any priority travel route or use area. Unit located within scenic viewshed. Not seen from Balls Lake or Control Lake. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Recommend (Type G shelterwood) harvest to retain thermal protection of site and improve regeneration success with 5 year time frame due to high elevation site. Retain approximately 50% of the basal area throughout all diameter classes and in hemlock and spruce species. Achieve partial suspension throughout unit. Split yard and directional fall away from Class III stream in center of unit. Unit boundary modified to below 1800' level due to stability/regeneration concerns. Mitigation measures for this unit are: F1, F3, F6, and W2. | | | |

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

VCU : 596

UNIT : 402

QUAD : C3-NW



- Revised Control Lake Project Boundary
- Post-Field Unit Boundary w/ Setting Codes
- Other Post-Field Unit Boundaries
- USFS Timber Types for Volc 4-7
- Eagle Tree Buffer of 330ft
- Existing & Rebuilt Roads
- F.S. Roads Under Construction
- Post-Field Proposed Roads
- Ahmu-Class 1 & Stream Chantypes
- Ahmu-Class 2 & Stream Chantypes
- Ahmu-Class 3 & Stream Chantypes
- Channel Type Change

- Lakes and Ponds
- Second Growth Units
- MMI 4
- McGilvery > 41
- Landings
- Stream & Lake NoCUT Buffers

May 17, 1994

0.5 MILE

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

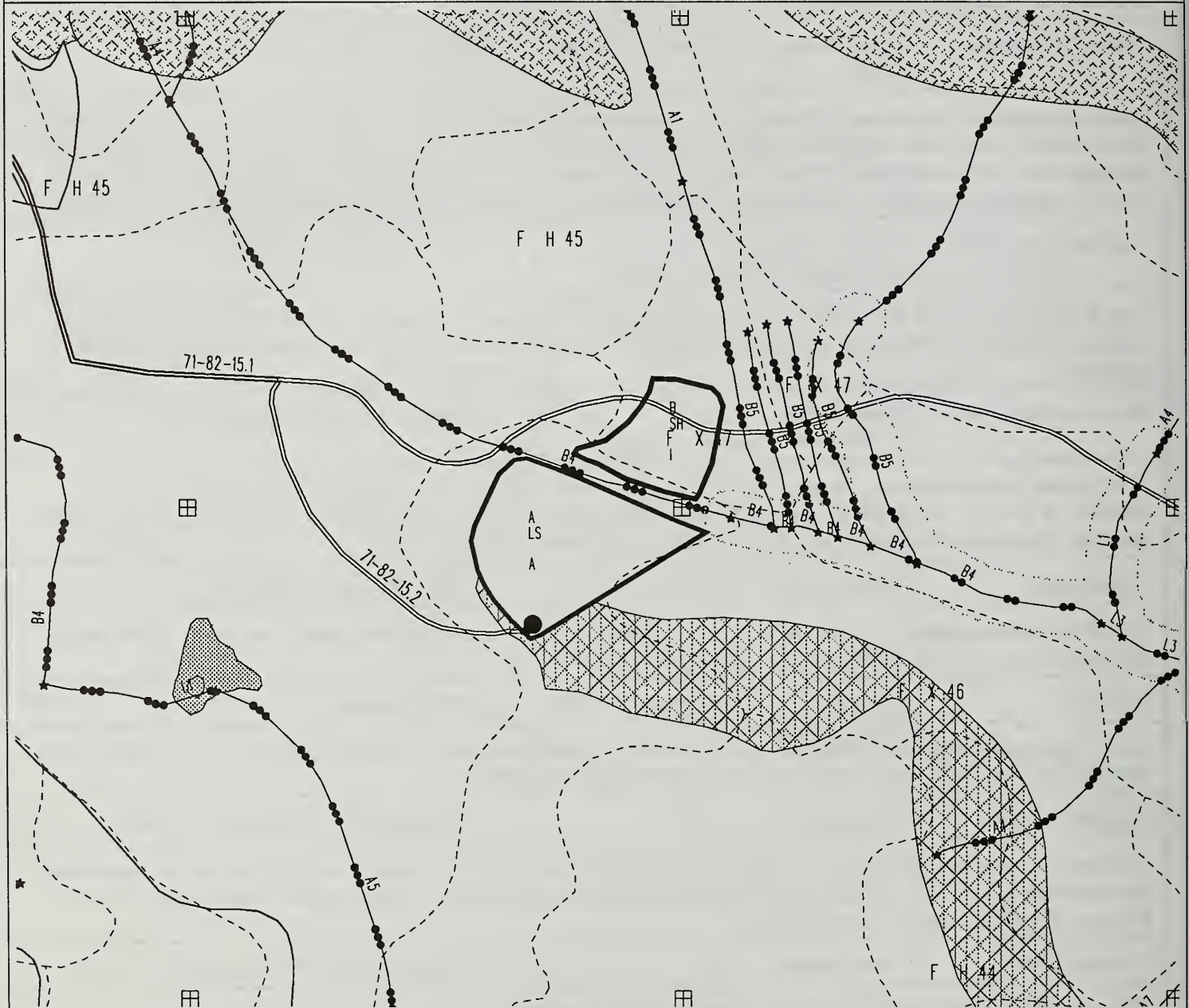
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|---|---|---|-------------------------|
| VCU #: 596 | UNIT #: 402 | QUARTER QUAD: C3NW | PHOTO YR/#: 1991/990-93 |
| ACRES: 24.6 | VOL.: 736.2 MBF | LOGGING SYSTEM: Running Skyline | |
| LANDSCAPE ZONE: Unit located in the Honker Divide Watershed. | | | |
| Timber/Vegetation | Field Review: T. Stecher/J. Goering, 7/6/93 | Office Review: J. Goering | |
| Species composition predominantly hemlock but includes some spruce and cedar. Regeneration concerns due to steep slope, shallow rocky soils, high elevation snow damage, and the presence of salmonberry in north half. Some poor soil drainage areas on the southwest portion. Consider partial retention harvest on upper slopes and southeast corner to promote regenerative success. Minimize soil compaction on the southern flat. Recommend partial suspension yarding. | | | |
| Logging/Transportation | Field Review: B. Webster/T. Wetzel, 7/04/93 | Office Review: E. Urstadt | |
| Unit is accessed by Road #71-82-15.1. Recommend a large swing yarder to handle big logs. Fifty percent is uphill logging. Partial cut is feasible in uphill yarding portion. Partial suspension is possible in most of the unit. Good economics. | | | |
| Watershed/Fisheries | Field Review: J. Metzler/S. Tanguay, 7/01/93 | Office Review: T. Stewart | |
| Unit laid out without buffering the large Class III stream on the western edge. Additional Class III streams flow southeast of the unit. Main stream is large bedrock channel with numerous waterfalls; very deeply incised above road crossing. Recommend keeping unit to west of this stream, above topographic break. | | | |
| Soils/Geology | Field Review: J. Metzler, 7/01/93 | Office Review: T. Stewart | |
| High MMI soils in majority of unit - achieve at least partial suspension where slopes greater than 50%. Bluff area in northeast corner is very high MMI and should be excluded from unit. | | | |
| Wildlife | Field Review: S. Tanguay, 7/01/93 | Office Review: | |
| Low to moderate wildlife sign observed. Large muskeg complex below unit. Maintain Level 2 structure retention due to unit affecting small old-growth patch within naturally fragmented matrix. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit not seen from any priority travel route or use area. Nice cascade stream channel, very high recreation opportunity. Buffer Stream 1 with 100' to 700' no-cut to provide recreational opportunity. Unit is located within scenic viewshed. Not seen from Balls Lake or Control Lake. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Shelterwood (Type G) stand below road by using corridor harvest and retaining overstory between corridors. Retention necessary to provide thermal protection for regeneration success. Type A clearcut unit above road. Achieve partial suspension where slopes over 50%. Boundary on northeast side modified to exclude MMI4 soils. Split yard and directional fall away from stream on west side of unit. Mitigation measures for this unit are: F1, F3, F6, F8, W2 (south 1/2) and W5 (north 1/2). | | | |

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

VCU : 596

UNIT : 403

QUAD : C3-NW



- Revised Control Lake Project Boundary
- Post-Field Unit Boundary w/ Setting Codes
- Other Post-Field Unit Boundaries
- USFS Timber Types for Volc 4-7
- Eagle Tree Buffer of 330ft
- Existing & Rebuilt Roads
- F.S. Roads Under Construction
- Post-Field Proposed Roads
- Ahmu-Class 1 & Stream Chantypes
- Ahmu-Class 2 & Stream Chantypes
- Ahmu-Class 3 & Stream Chantypes
- Channel Type Change

- Lakes and Ponds
- Second Growth Units
- MMI 4
- McGilvery > 41
- Landings
- Stream & Lake NoCUT Buffers

May 17, 1994

.5 MILE

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

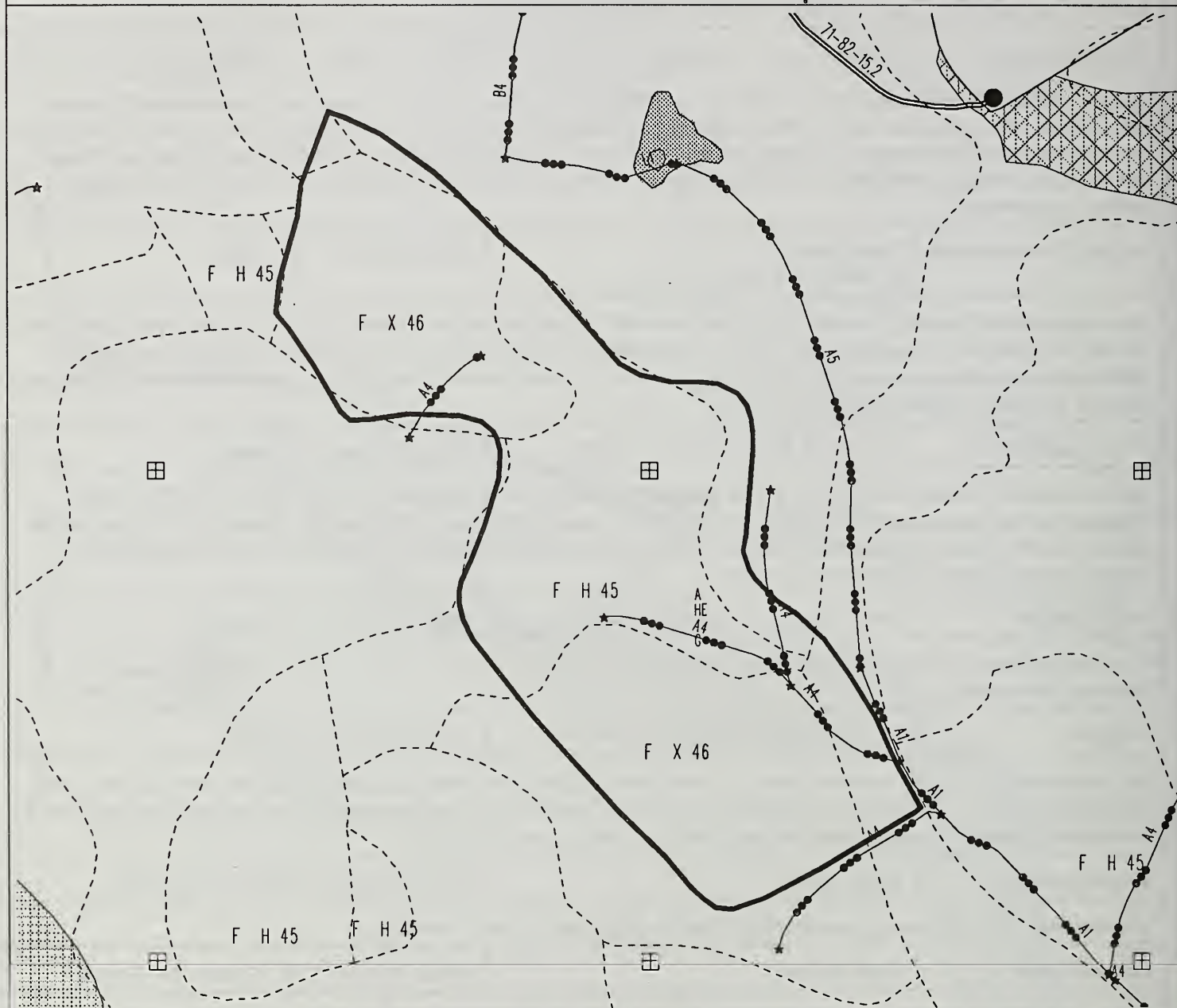
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| VCU #: 596 | UNIT #: 403 | QUARTER QUAD: C3NW | PHOTO YR/#: 1991/990-94 |
| ACRES: 12.7 | VOL.: 349.1 MBF | LOGGING SYSTEM: Live Skyline, Shovel | |
| LANDSCAPE ZONE: Unit is within the Honker Divide Watershed. | | | |
| Timber/Vegetation | Field Review: T. Stecher, 8/11/93 | Office Review: J. Goering | |
| Species composition predominantly hemlock but includes some spruce and cedar. Regeneration predominantly hemlock but includes a few cedar and spruce. Poor regeneration throughout due to poor soil drainage, dense understory vegetation and/or high elevation influences. Unstable slopes due to poor soil drainage in the southern portion. Many small seeps, and poor soil drainage throughout. Consider partial retention harvest to promote regenerative success and desirable species composition. | | | |
| Logging/Transportation | Field Review: S. Field/D. Keister, 8/24/93 | Office Review: M. Whitty | |
| Recommend shovel logging on north 1/3 of unit north of 70' buffered stream. Southern 2/3 of unit will be logged with a live skyline/shotgun configuration with tailholds across the 70' buffered stream. This portion of the unit has obvious deflection to provide partial suspension. A medium tower is recommended. Partial cut of southern portion to retain root strength is feasible. Good economic feasibility. | | | |
| Watershed/Fisheries | Field Review: J. Metzler, 8/06/93 | Office Review: T. Stewart | |
| Several Class III streams east of the unit that flow into a Class II just downstream and east of the unit. The stream bisecting the unit requires a 70' buffer on each side due to major influence on the Class II. There is an alluvial fan east of the unit with several discontinuous channels. The east unit boundary should be kept 50' east of the orange/white flagged stream in order to retain root strength. | | | |
| Soils/Geology | Field Review: J. Metzler, 8/06/93 | Office Review: T. Stewart | |
| North-facing slopes in south half of unit are wet and moderately steep (60% to 70%). Achieve partial suspension to minimize disturbance. | | | |
| Wildlife | Field Review: M. Minnillo, 8/06/93 | Office Review: C. Confer | |
| No previous harvest in the drainage. Steep, high elevation alpine to the north and south. High use deer and bear cover throughout the unit. Recommend deleting the north half of unit (north of main stream) due to very high deer/bear use for cover/travel corridor between alpine and open valley. Structure retention level 1. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit not seen from any priority travel route or use area. Unit is in scenic viewshed. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| North 1/2 of unit patch cut in groups (group selection) Type I to improve regeneration success on poorly drained site and to reduce harvest impact to wildlife travel corridor. Retain approximately 30% of the stand in groups of trees that range in size from 1/10 to 1/4 acres distributed throughout unit. Emphasize retaining groups in low swales where existing regeneration is poor. South 1/2 of unit to be harvested using Type A clearcut. Achieve partial suspension in southern 1/2 of unit. No-cut 70' buffer along both sides of stream that flows between the two parts of the unit. Mitigation measures for this unit are: F3, F5, F10, W2 (north 1/2), and W5 (south 1/2). | | | |

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

VCU : 596

UNIT : 404

QUAD : C3-NW



- Revised Control Lake Project Boundary
- Post-Field Unit Boundary w/ Setting Codes
- Other Post-Field Unit Boundaries
- USFS Timber Types for Volc 4-7
- Eagle Tree Buffer of 330ft
- Existing & Rebuilt Roads
- F.S. Roads Under Construction
- Post-Field Proposed Roads
- Ahmu-Class 1 & Stream Chantypes
- Ahmu-Class 2 & Stream Chantypes
- Ahmu-Class 3 & Stream Chantypes
- Channel Type Change

- Lakes and Ponds
- Second Growth Units
- MMI 4
- McGilvery > 41
- Landings
- Stream & Lake NoCUT Buffers

May 17, 1994

.5 MILE

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

| | | | |
|--|--|---|-------------------------|
| VCU #: 596 | UNIT #: 404 | QUARTER QUAD: C3NW | PHOTO YR/#: 1991/990-94 |
| ACRES: 78.4 | VOL.: 2396.2 MBF | LOGGING SYSTEM: Helicopter | |
| LANDSCAPE ZONE: Unit is within the Honker Divide Watershed and the Ball's Lake Corridor. | | | |
| Timber/Vegetation | Field Review: J. Miller/J. Goering, 8/24/93 | Office Review: J. Goering | |
| Species composition predominantly hemlock with some spruce. Few cedar are present. Regeneration predominantly hemlock but includes some spruce. Poor regeneration on the northeastern half due to slope failures, brush incursions and snow damage. Windthrow damage associated with poor soil drainage and shallow soils in middle portion of unit. Slope instability/failure potential existing. Many sloughs/slope failures in the upper elevations of the unit. Unstable slopes due to thin soil, poor soil drainage areas throughout. Many small drainages throughout unit. Probable salmonberry incursions with soil disturbance based on existing densities and open patches. Rock outcrops and snow damage to regeneration evident in the upper elevations. Consider partial retention helicopter harvest with retention of extreme upper elevation and northern portions. | | | |
| Logging/Transportation | Field Review: T. Wetzel/D. Foster, 8/11/93 | Office Review: M. Whitty | |
| Accessed by Rd #71-82-8.1 (abandoned). Recommend helicopter logging utilizing selective harvest. Landing is on Rd #71-82-15.2 near Unit 596-403. Flight distance is approximately 2,500' to 3,000'; maximum slope is 15%. | | | |
| Watershed/Fisheries | Field Review: J. Metzler, 8/06/93 | Office Review: T. Stewart | |
| Three Class III streams in and adjacent to unit. Stream 2 is a shallow V-notch that should be split yarded. Stream 3 is also a shallow V-notch that makes a logical southeast unit boundary. The Class III stream near the southeast corner is very deeply incised and the unit boundary should stay above the topographic break. | | | |
| Soils/Geology | Field Review: J. Metzler, 8/06/93 | Office Review: T. Stewart | |
| Several small, shallow slumps occur in the northwest portion of the unit. These are vegetated with devils club and ferns. Slopes are 60% to 80% in the northwest end and 50% to 70% in the remainder of unit. This unit should be partial cut to retain root strength and aid in regeneration. Achieve at least partial suspension throughout unit. | | | |
| Wildlife | Field Review: M. Minnillo, 8/06/93 | Office Review: M. Hall | |
| Snag retention level 1. Use road as the eastern boundary to maintain some cover between unit and valley/muskeg to east of unit. Moderate/heavy deer use; deer trails abundant. Maintain north-central boundary away from muskeg; make road east unit boundary. Retain Level 1 structure. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit not seen from any priority travel route or use area. Unit is in scenic viewshed. Most likely not seen from Ball's Lake or Control Lake. Partial Retention VQO. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Helicopter log (Type G shelterwood) cut retaining approximately 30% of basal area throughout all diameter classes present. Retention intended to provide seed source and snow interception for regeneration, to reduce mass movement potential, to help maintain root strength, to help meet Partial Retention VQO and to retain structure for habitat diversity. Retain existing species composition and trees uniformly throughout stand. Split yard and directional fall along Class III stream that flows through the central part of the unit. Mitigation measures for this unit are: F3, W2, and V2. | | | |

NO UNIT MAP
UNIT DROPPED OR DEFERRED

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

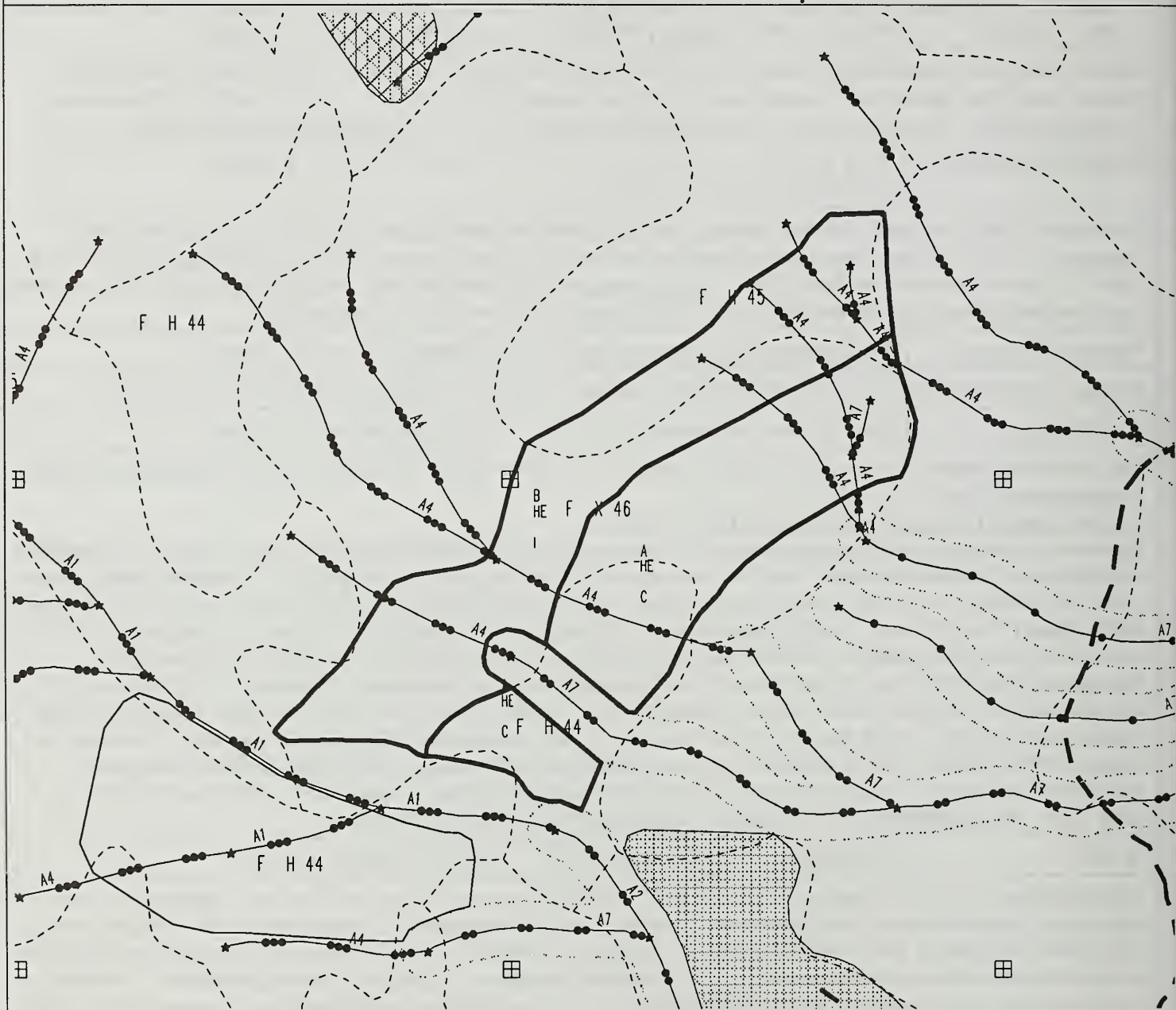
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| VCU #: 596 | UNIT #: 405 | QUARTER QUAD: C3NW | PHOTO YR/#: 1991/690-177 |
| ACRES: | VOL.: | LOGGING SYSTEM: Slackline | |
| LANDSCAPE ZONE: Unit is within the Honker Divide Watershed. | | | |
| Timber/Vegetation | Field Review: T. Stecher, 8/21/93 | Office Review: J. Goering | |
| Species composition predominantly hemlock with some cedar. Few spruce are present. Regeneration predominantly hemlock with a few spruce but is lacking cedar. Moderate amounts of stem decay evident in hemlock. Shallow soils overlying bedrock. Windthrow damage evident throughout the unit. Karst topography in the southern half. | | | |
| Logging/Transportation | Field Review: T. Wetzel/J. Herzberg, 8/31/93 | Office Review: K. Jehnke | |
| Recommend a 70' tower with slackline system. This will attain partial suspension over the area of required partial suspension. There is a karst near the road location; however if the road is moved downslope it infringes on the TTRA buffer. It cannot be moved up the hill due to grade restraints. Easy road building. Full suspension in the area requested was considered unnecessary by the field crew. Partial suspension is available and reasonable. | | | |
| Watershed/Fisheries | Field Review: B. Romey, 8/06/93 | Office Review: T. Stewart | |
| Streams 1 and 2 are Class III, O/W, split yard full suspension. Stream 3 is Class IIa, B/W, 100' TTRA buffer. | | | |
| Soils/Geology | Field Review: M. Minnillo, 8/05/93 | Office Review: T. Stewart | |
| Full suspension required in the upper northwest portion of unit where slopes exceed 60%. Partial suspension required throughout rest of unit. <u>Geology/Karst (D. Herron/R. Horrocks, 8/12/93 & 8/22/93:</u> Limestone unit which trends discontinuously with northeast trend and northwest dip across zone. Several caves and other surface erosion features identified. One cave has numerous exits along a well-developed grike. Runnels located on cave entrances. Second cave tens to parallel ground surface. Both termed fossil caves. Third phreatic tube located at base of doline about 15' to 20' deep. Fourth fissure on side of sinkhole that had potential for opening up underground. Fifth cave at bottom of shall sinkhole - sinkhole looks like breakthrough into roof of cave, extends in two directions. Resurgence found at the base of the limestone tense, passage completely underwater. No access. The limestone rib is less than 200' to 300' thick and possibly continuous for 2 to 3 miles. Location in hillside indicated possibility of large drainage area up slope. Karst features will not be extensive but the number of features raise questions of potential for logging without damage. Seven caves and numerous significant karst features were located, including insurgences, resurgences, and dolines. Significant karst is located along lower 2/3 of unit. Upper 1/3 of unit drains into karst on a steep slope. Recommend that unit be dropped. Drop road planned through karst area. | | | |
| Wildlife | Field Review: M. Minnillo, 8/05/93 | Office Review: M. Hall | |
| Delete portion of unit above meadow to west of unit. This area has extensive deer and bear use. Meadow serves as a major travel corridor between upper elevation Alpine and lower elevation habitat. Recommend a 200' corridor be left along stream to south of unit to maintain corridor. Snag level 1 retention. Pair of cranes and one young crane observed in grassy meadow near southwest corner of unit. Red-tailed adult/juvenile flying and roosting within unit. Moderate to heavy deer use. Some bear use. Recommend maintaining 200' corridor along south boundary to maintain high wildlife use/travel. Retain Level 1 structure. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig, T. Stewart | |
| Unit not seen from any priority travel route or use area. Keep below 1300' due to visibility from Ball's Lake. Seen from Ball's Lake and Control Lake in Middleground. Partial Retention VQO. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Deferred due to extensive karst features. | | | |

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

VCU : 596

UNIT : 406

QUAD : C3-NW



- Revised Control Lake Project Boundary
- Post-Field Unit Boundary w/ Setting Codes
- Other Post-Field Unit Boundaries
- USFS Timber Types for Volc 4-7
- Eagle Tree Buffer of 330ft
- Existing & Rebuilt Roads
- F.S. Roads Under Construction
- Post-Field Proposed Roads
- Ahmu-Class 1 & Stream Chantypes
- Ahmu-Class 2 & Stream Chantypes
- Ahmu-Class 3 & Stream Chantypes
- Channel Type Change

- Lakes and Ponds
- Second Growth Units
- MMI 4
- McGilvery > 41

- Landings
- Stream & Lake NoCUT Buffers

May 17, 1994

.5 MILE

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

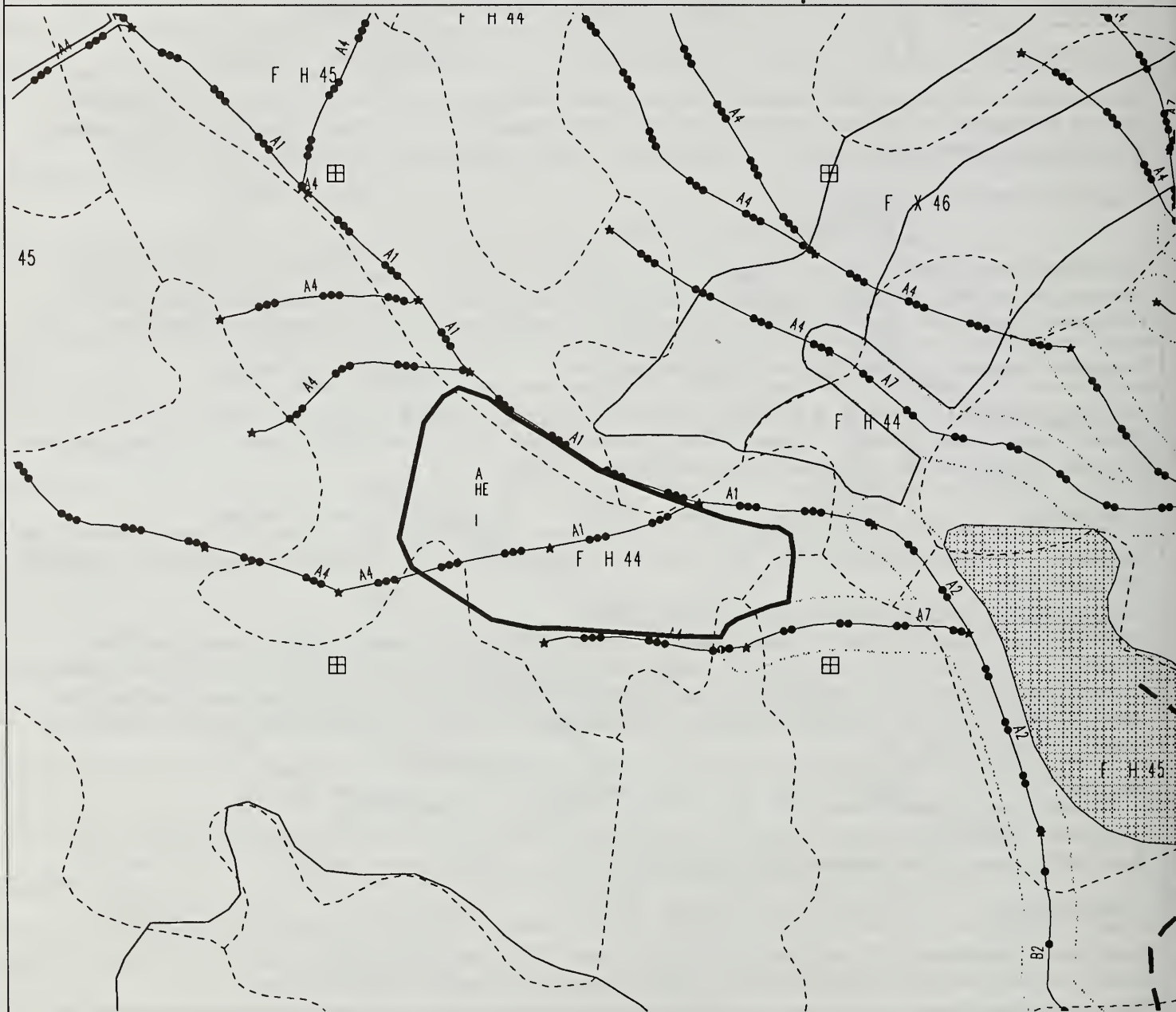
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| VCU #: 596 | UNIT #: 406 | QUARTER QUAD: C3NW | PHOTO YR/#: 1991/690-179 |
| ACRES: 54.6 | VOL.: 1681.7 MBF | LOGGING SYSTEM: Helicopter | |
| LANDSCAPE ZONE: Unit is within Ball's Lake Corridor and Honker Divide Watershed. | | | |
| Timber/Vegetation | Field Review: T. Stecher, 8/7/93 | Office Review: J. Goering | |
| Species composition predominantly hemlock with some cedar. Few spruce are present. Regeneration predominantly hemlock and includes a few cedar in the southeast section but is lacking spruce. Alaska yellow cedar decline evident. Karst topography with sink holes in the northeast corner. Partial retention in the northwest half due to visuals | | | |
| Logging/Transportation | Field Review: M. Whitty/ J. Graves, 9/04/93 | Office Review: M. Whitty | |
| Recommend conventional helicopter logging to meet visual impact restrictions. Approximately 75 acre selective helicopter harvest with landing and maintenance area 3,000' south of unit in vicinity of quarry on existing spur road. Helicopter logging of the area designated for swingyarding was determined to be more appealing economically. | | | |
| Watershed/Fisheries | Field Review: J. Metzler, 8/05/93 | Office Review: T. Stewart | |
| There are three Class III streams in the east 1/2 of the original unit. Streams 1, 2, and 3 are small, not incised, and should be split yarded if practical. Stream 4 is south of the original unit and has shifted channels on the upper portion of the slope. Retain trees 30' to 50' from the stream for root strength. | | | |
| Soils/Geology | Field Review: J. Metzler, 8/05/93 | Office Review: T. Stewart | |
| No special concerns; slopes above 70%. No active or past landslides observed. Slopes are less than 40% in portion of unit below 750'. <u>Geology/Karst (D. Herron/R. Horrocks, 8/19/93 & 8/20/93:</u> Southeast facing slope, lower portion contains quartzite, upper (karst) portion andesite. Thin discontinuous layer of limestone traverses unit. Nine large dolines identified with one steeply sloping cave with about 30' of passage visible. Closed drainage in area. One significant cave was located, as well as numerous significant insurgences and sinkholes within the upper 1/3 of unit. Carbonate rock also limited to upper 1/3 of unit. Recommend moving unit boundary to exclude the upper 1/3 of unit. | | | |
| Wildlife | Field Review: M. Metzler, 8/05/93 | Office Review: M. Hall | |
| Unit located within large, contiguous stand. Low wildlife use. Deer trails located primarily in upper portion of unit above 900' elevation. Unit bordered by muskeg above and below. Retain Level 1 structure. | | | |
| Visual/Recreation | Field Review: J. Metzler, 8/05/93 | Office Review: S. Bedross, M. Greenig | |
| Lakes visible from above 750' elevation. Keep clearcut below 750'. Selectively log upper portion with helicopter. Keep below 750' due to visibility. Seen from Ball's Lake in Foreground. Retention VQO to be met. Upon completion of harvest, keep road open to unit; build parking area for 3-4 vehicles. Close road beyond unit and revegetate sections that would serve as part of the Thorne Mountain Trail to create a more "trail-like" setting. When building road along section to become part of trail, keep road width, cut and fill areas as narrow as possible. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Defer uppermost portion of unit down to approximately 900' elevation due to limestone and karst features. Unit expanded to the southwest as shown. Upper portion of unit between 750 and 900' will be selectively cut (Type I) taking 10% of the volume as scattered trees to meet Retention VQO. Lower portion of unit will be a Type C clearcut by helicopter. Directionally fall trees away from streams near east end of unit. Deferred areas could possibly be harvested after the zone of watershed influence to karst has been determined. Mitigation measures for this unit are: F6, M2, V2, W2, and W3. | | | |

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

VCU : 596

UNIT : 407

QUAD : C3-NW



- Revised Control Lake Project Boundary
- Post-Field Unit Boundary w/ Setting Codes
- Other Post-Field Unit Boundaries
- USFS Timber Types for Volc 4-7
- Eagle Tree Buffer of 330ft
- Existing & Rebuilt Roads
- F.S. Roads Under Construction
- Post-Field Proposed Roads
- Ahmu-Class 1 & Stream Chantypes
- Ahmu-Class 2 & Stream Chantypes
- Ahmu-Class 3 & Stream Chantypes
- Channel Type Change

- Lakes and Ponds
- Second Growth Units
- MMI 4
- McGilvery > 41
- Landings
- Stream & Lake NoCUT Buffers

.5 MILE

May 17, 1994

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD













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|---|-----------------------------------|---|--------------------------|
| VCU #: 596 | UNIT #: 407 | QUARTER QUAD: C3NW | PHOTO YR/#: 1991/690-179 |
| ACRES: 22.5 | VOL.: 212.2 MBF | LOGGING SYSTEM: Helicopter | |
| LANDSCAPE ZONE: Unit is within Ball's Lake Corridor and Honker Divide Watershed. | | | |
| Timber/Vegetation | Field Review: T. Stecher, 8/7/93 | Office Review: J. Goering | |
| Species composition predominantly hemlock with some cedar. Few spruce are present. Regeneration predominantly hemlock but includes some cedar. Muskeg incursions incorporated with mixed species, low volume timber in some areas. Low volume, mixed-species, multi-canopy stand with < 50% canopy closure and low site productivity. Relatively shallow soils, and poor soil drainage throughout unit. Partial retention helicopter harvest. | | | |
| Logging/Transportation | Field Review: none | Office Review: K. Jehnke | |
| Unit was not visited by logging engineers. Unit is close to Control Lake and must meet Partial Retention VQO. Therefore, recommend helicopter logging. Yard to Road #71-82-21 on existing USFS road (east of unit). Average flight distance = 2500 feet. Average flight slope = -10%. Fair economics. | | | |
| Watershed/Fisheries | Field Review: J. Metzler, 8/05/93 | Office Review: T. Stewart | |
| There are 2 Class III streams within and adjacent to the unit. Retain windfirm trees within 100' of bank to provide root stability. These streams flow into a Class II/I shortly below the unit boundary. | | | |
| Soils/Geology | Field Review: J. Metzler, 8/05/93 | Office Review: T. Stewart | |
| Some instability in inner gorge of stream along north boundary above 800' elevation where slopes are steep; otherwise, no special concerns. Geology/Karst (D. Herron/R. Horrocks, 8/24/93): Adjacent c/o units with limestone. No limestone or karst features identified. No bedrock exposed. Unit is down dip from limestone unit. | | | |
| Wildlife | Field Review: J. Metzler, 8/05/93 | Office Review: R. Fairbanks | |
| Little sign, tracks, trails, etc, in unit. Dense VACCI understory beneath open low volume stand. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig, T. Stewart | |
| Unit not seen from any priority travel route or use area. Unit is to be laid out as shown by A. Wolfson. Seen from Ball's Lake in Middleground. Partial Retention VQO to be met. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Helicopter Type I single tree or group selection to meet Partial Retention VQO. Directionally fall away from Class III stream that flows west-east across the unit. Directionally fall away from the streams bounding the unit on the north and south. Mitigation measures for this unit are: F6, V2, and W2. | | | |







CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

UNIT : 409

QUAD : C3-NW



-  Revised Control Lake Project Boundary
-  Post-Field Unit Boundary w/ Setting Codes
-  Other Post-Field Unit Boundaries
-  USFS Timber Types for Volc 4-7
-  Eagle Tree Buffer of 330ft
-  Existing & Rebuilt Roads
-  F.S. Roads Under Construction
-  Post-Field Proposed Roads
-  Ahmu-Class 1 & Stream Chantypes
-  Ahmu-Class 2 & Stream Chantypes
-  Ahmu-Class 3 & Stream Chantypes
-  Channel Type Change

-  Lakes and Ponds
 Second Growth Units
 MMI 4
 McGilvery > 41
 Landings
 Stream & Lake NoCUT Buffers

.5 MILE

May 17, 1994

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

| | | | |
|---|------------------------------------|---|--------------------------|
| VCU #: 596 | UNIT #: 409 | QUARTER QUAD: C3NW | PHOTO YR/#: 1991/690-193 |
| ACRES: 28.5 | VOL.: 1104.4 MBF | LOGGING SYSTEM: Helicopter | |
| LANDSCAPE ZONE: Unit is within the Honker Divide Watershed near Control Lake. | | | |
| Timber/Vegetation | Field Review: M. Case, 7/28/93 | Office Review: J. Goering | |
| Very large trees reaching 175' and over 60" DBH. Species composition predominantly hemlock but includes some spruce and cedar. Regeneration predominantly hemlock but includes some spruce. Light windthrow damage present in south-central portion of unit. Low to moderate amounts of mistletoe infection evident in canopy. Possible salmonberry and brush incursions with soil disturbance based on existing moderate densities. Harvest all mistletoe infected hemlock and cut infected regeneration. Consider partial retention due to proximity to Control Lake and to promote desirable species regeneration. | | | |
| Logging/Transportation | Field Review: none | Office Review: K. Jehnke | |
| Unit was not visited by logging engineers. Recommend helicopter logging. Yard to Unit 596-410. Landings may need to be enlarged. Average flight distance = 2200 feet. Average flight slope = -4%. These same landings will also be needed to helicopter log Unit 595-410. | | | |
| Watershed/Fisheries | Field Review: B. Romey, 7/15/93 | Office Review: T. Stewart | |
| Streams 3, 4, and 5 are all Class III - flagged O/W, split yard, directional fall. Stream 2 is Class I - flagged B/W, 200' buffer for B1 channel type. Stream 1 - flag G/W (not flagged), use as unit boundary. Control Lake approximately 1/4 mile northwest of unit. | | | |
| Soils/Geology | Field Review: M. Minnillo, 7/15/93 | Office Review: T. Stewart | |
| Slopes of 70% to 80% throughout unit. Some McGilvery soils near upper unit boundary. Recommend partial suspension throughout due to slope steepness and large trees. Split yard two unstable V-notches in center of unit. | | | |
| Wildlife | Field Review: M. Minnillo, 7/15/93 | Office Review: M. Hall | |
| Leave structure standing along split yard notches. Maintain Level 1 structure retention. Structure will be maintained in Class I stream buffer on south side of unit. Initial entry into an area of contiguous habitat. Avoid disturbance of wintering trumpeter swans by avoiding all human activity with 0.5 mile of known swan wintering areas during October 15 through March 15. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit not seen from any priority travel route or use area. Not seen from Control Lake. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Unit boundary modified so not visible from Control Lake. Directional fall away from Class III streams in unit. Unit does not extend to Class I stream at south boundary. Type C clearcut. Helicopter logging will mitigate suspension and split yard concerns. Retain small diameter cedar. Mitigation measures for this unit are: F3, F5, F6, and W3. | | | |

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

VCU : 596

UNIT : 410

QUAD : C3-NW



- Revised Control Lake Project Boundary
- Post-Field Unit Boundary w/ Setting Codes
- Other Post-Field Unit Boundaries
- USFS Timber Types for Volc 4-7
- Eagle Tree Buffer of 330ft
- Existing & Rebuilt Roads
- F.S. Roads Under Construction
- Post-Field Proposed Roads
- Ahmu-Class 1 & Stream Chantypes
- Ahmu-Class 2 & Stream Chantypes
- Ahmu-Class 3 & Stream Chantypes
- Channel Type Change

- Lakes and Ponds
- Second Growth Units
- MMI 4
- McGilvery > 41
- Landings
- Stream & Lake NoCUT Buffers

0.5 MILE

May 17, 1994

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

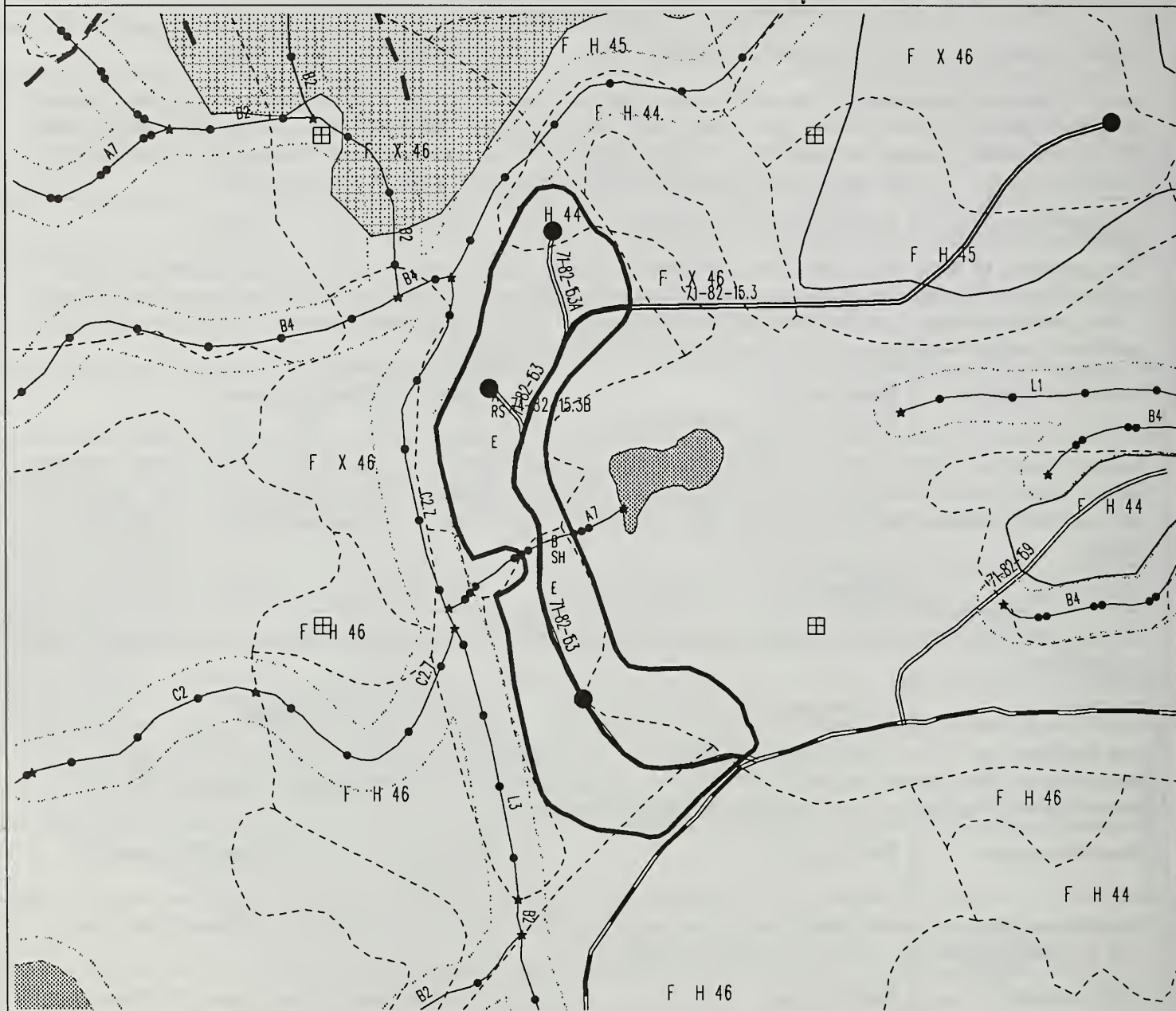
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| VCU #: 596 | UNIT #: 410 | QUARTER QUAD: C3NW | PHOTO YR/#: 1991/690-193 |
| ACRES: 24.9 | VOL.: 414.3 MBF | LOGGING SYSTEM: Running Skyline/Swingyarder | |
| LANDSCAPE ZONE: Unit is located in the Rio Roberts Watershed. | | | |
| Timber/Vegetation | Field Review: J. Miller, 7/28/93 | Office Review: J. Goering | |
| Species composition predominantly hemlock but includes some spruce and cedar. Regeneration predominantly hemlock but includes a few cedar and spruce. Fairly dense understory vegetation. Moderately low volume, multi-canopy stand with < 50% canopy closure and relatively low site productivity. Many small drainages through unit. Some thin soil, poor soil drainage. Consider partial retention/seedtree harvest to promote spruce/cedar regeneration. | | | |
| Logging/Transportation | Field Review: S. Field/B. Flatz, 8/07/93 | Office Review: M. Whitty | |
| Unit is accessed by Road #71-82-28. The recommended logging system is swing yarder with running skyline. Run additional profiles during final layout to assure the required partial suspension. Stream buffer within unit is not flagged. A 100 foot stream buffer is on the north half of NE boundary. Split yarding streams that are close to each other is a problem. Confirm resource concerns before final layout. Good economics. | | | |
| Watershed/Fisheries | Field Review: B. Romey/M. Minnillo, 7/15/93 | Office Review: T. Stewart | |
| Stream 1 is a Class I - B/W, 100' TTRA buffer and 100' selective cut buffer. Stream 2 is a Class IIa - B/W, 100 TTRA buffer. Stream 2a is a Class III - O/W, split yard; directional fall. Streams 3 and 5 - flagged B/W to 700' elevation, split yard and directional fall above 700' elevation. Stream 4, Class III with no protection required - treat as G/W flagged. | | | |
| Soils/Geology | Field Review: M. Minnillo, 7/15/93 | Office Review: T. Stewart | |
| McGilvery soils present just to the south of unit. Low slopes, wet. Recommend partial suspension to minimize damage to wet slopes. | | | |
| Wildlife | Field Review: M. Minnillo, 7/15/93 | Office Review: M. Hall | |
| Low deer/bear sign. Low wildlife sign throughout unit. Active beaver dams to north of unit. Structure will be maintained on Class I stream; retain Level 1 structure. Contiguous old-growth. Recommend additional 150' select harvest buffer along riparian area to maintain hiding/feeding cover. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig, T. Stewart | |
| Unit not seen from any priority travel route or use area. Keep below 700' due to visibility from Control Lake cabin. Unit in modified landscape. Not seen from Control Lake. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Note buffer requirements in watershed section. All Class I and II streams require 100' buffer. Class I and II streams inside unit did not have buffers flagged in field. Class III stream in unit does not require split yarding. Recommend partial suspension throughout unit. Recommend that additional profiles be conducted in unit to ensure that partial suspension can be achieved throughout unit. Below road retain trees < 15" DBH (Type E overstory removal) for wildlife corridor/structure. Type A clearcut above road. A designed landing is required in setting B, or the road alignment moved upslope. Mitigation measures for this unit are: F3, F5, F6, F10, W2 (below road), and W5 (above road). | | | |

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

VCU : 596

UNIT : 412

QUAD : C3-NE



- Revised Control Lake Project Boundary
- Post-Field Unit Boundary w/ Setting Codes
- Other Post-Field Unit Boundaries
- USFS Timber Types for Volc 4-7
- Eagle Tree Buffer of 330ft
- Existing & Rebuilt Roads
- F.S. Roads Under Construction
- Post-Field Proposed Roads
- Ahmu-Class 1 & Stream Chantypes
- Ahmu-Class 2 & Stream Chantypes
- Ahmu-Class 3 & Stream Chantypes
- Channel Type Change

- Lakes and Ponds
- Second Growth Units
- MMI 4
- McGilvery > 41
- Landings
- Stream & Lake NoCUT Buffers

0.5 MILE

May 17, 1994

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

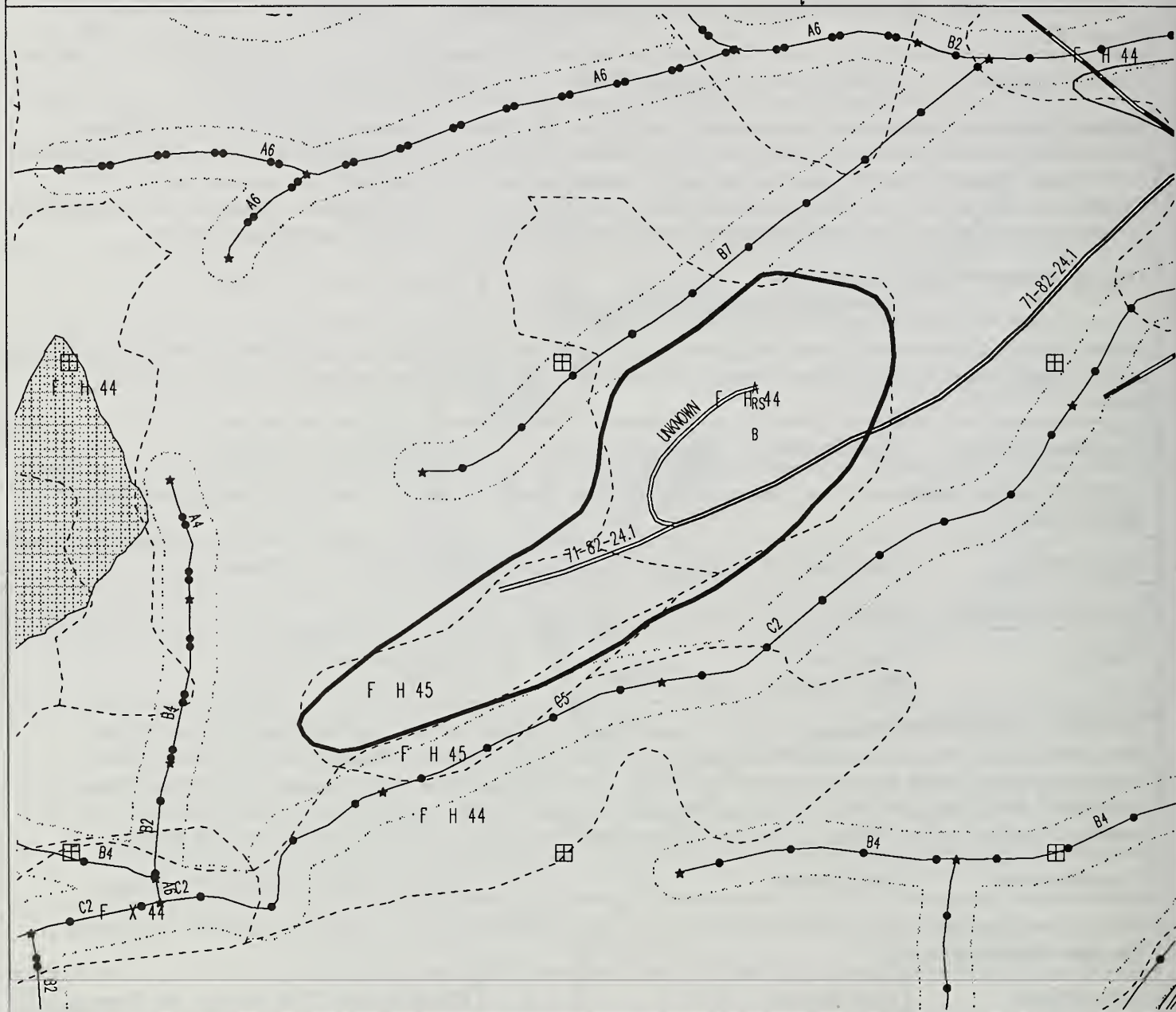
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|--|--|---|---------------------------|
| VCU #: 596 | UNIT #: 412 | QUARTER QUAD: C3-NE | PHOTO YR/#: 1991/1090-194 |
| ACRES: 31.1 | VOL.: 779.0 MBF | LOGGING SYSTEM: Swingyarder/Running Skyline, Shovel | |
| LANDSCAPE ZONE: South half of unit is within USFS 30 Road Corridor. North half of unit is within proposed Honker Block. | | | |
| Timber/Vegetation | Field Review: T. Stecher, 6/14/93 | Office Review: J. Goering | |
| Species composition predominantly hemlock with some cedar. Few spruce are present. Regeneration predominantly hemlock but includes some spruce. Some thin soil, poor soil drainage areas. Saturated meadow and riparian soils west of beaver pond (drainage). Low to moderate amounts of stem decay evident in hemlock in the southern section. Recommend 100' buffer from beaver pond and Class I stream. Good advanced regeneration (candidate for release) in the northern section and along the eastern boundary. Partial retention/buffer of drainage west of beaver pond. | | | |
| Logging/Transportation | Field Review: J. Estabrook/J. Doyal/C. Giles, 8/16/93 | Office Review: E. Urstadt | |
| Harvest system is to shovel log east of road and swingyard west of road. Unit is accessed by Rd #71-82-15.3, 15.3B, and 15.3A. Road crosses a Class I stream. Partial cut is feasible. Blowdown is not a problem. Unit is economical to harvest. | | | |
| Watershed/Fisheries | Field Review: M. Minnillo, 6/05/93 | Office Review: T. Stewart | |
| 100' TTRA buffer required on Class I stream along west side of unit (Stream 1). Split yarding required on Stream 2 in middle of unit. | | | |
| Soils/Geology | Field Review: M. Minnillo, 6/05/93 | Office Review: T. Stewart | |
| No signs of instability, windthrow, etc. No concerns. Low slopes. | | | |
| Wildlife | Field Review: M. Minnillo/C. Confer, 6/05/93 | Office Review: M. Hall | |
| 100' TTRA buffer will help maintain some cover along heavily traveled riparian corridor along west side of unit. Recommend eagle survey be completed prior to harvest. Heavy bear sign/use. Possible bear den present. Low to moderate deer use in unit, but in northern end it is high. No special concerns noted. Retain Level 2 structure due to proximity to NCC's and narrowness of old-growth patch segment. Avoid disturbance of wintering trumpeter swans by avoiding all human activity within 0.5 mile of known swan wintering areas during October 15 through March 15. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit not seen from any priority travel route or use area. Scenic Viewshed LUD. Seen from Road 30 in Foreground. Maximum Modification VQO. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Type E overstory removal of trees 16" DBH and greater with care to protect advanced regeneration where possible. Maintain 100' buffer on Class I stream flowing along east boundary. Split yard Class III stream in middle of unit. During final layout confirm that this stream is actually Class III. The lower portion received a 100' buffer in the field which may not be necessary. Mitigation measures for this unit are: F5, F6, F8, F10, and W2. | | | |

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

VCU : 596

UNIT : 413

QUAD : C3-NE



- | | | | |
|--|---|--|-----------------------------|
| | Revised Control Lake Project Boundary | | Lakes and Ponds |
| | Post-Field Unit Boundary w/ Setting Codes | | Second Growth Units |
| | Other Post-Field Unit Boundaries | | MMI 4 |
| | USFS Timber Types for Volc 4-7 | | McGilvery > 41 |
| | Eagle Tree Buffer of 330ft | | Landings |
| | Existing & Rebuilt Roads | | Stream & Lake NoCUT Buffers |
| | F.S. Roads Under Construction | | |
| | Post-Field Proposed Roads | | |
| | Ahmu-Class 1 & Stream Chantypes | | |
| | Ahmu-Class 2 & Stream Chantypes | | |
| | Ahmu-Class 3 & Stream Chantypes | | |
| | Channel Type Change | | |

.5 MILE

May 17, 1994

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

| | | | |
|---|------------------------------------|---|--------------------------|
| VCU #: 596 | UNIT #: 413 | QUARTER QUAD: C3NE | PHOTO YR/#: 71-31-15-192 |
| ACRES: 39.2 | VOL.: 1007.6 MBF | LOGGING SYSTEM: Swingyard/Running Skyline | |
| LANDSCAPE ZONE: Unit is in Rio Roberts Corridor. | | | |
| Timber/Vegetation | Field Review: J. Miller, 7/6/93 | Office Review: A. Wolfson | |
| Trees are 70' to 100' tall, with upper elevations containing poor quality timber. Mostly mountain hemlock, western hemlock; some yellow and red cedar. Regeneration is good, mostly western hemlock and some cedar. | | | |
| Logging/Transportation | Field Review: none | Office Review: E. Urstadt | |
| This unit is directly north of Rio Roberts Creek. A hiking trail is located up the creek and leads to a fish passage which has recreational value. Field resource specialists determined that this unit should be dropped (mainly because of the hiking trail). Therefore, the engineers have not field verified this unit. A swing yarder with running skyline should be able to harvest the unit. Access road should be numbered 71-82-24.1. One small stub spur may be necessary, Road #71-82-24.1A. | | | |
| Watershed/Fisheries | Field Review: M. Minnillo, 6/24/93 | Office Review: T. Stewart | |
| 100' TTRA buffer on Class I stream to the north of unit. 100' TTRA buffer on Class I stream to the south of unit. | | | |
| Soils/Geology | Field Review: M. Minnillo, 6/24/93 | Office Review: T. Stewart | |
| Slopes are stable, no signs of instability. | | | |
| Wildlife | Field Review: M. Minnillo, 6/24/93 | Office Review: R. Fairbanks | |
| Maintain northern unit boundary at least 50' from muskeg to provide some cover for deer and bear utilizing the muskegs. Retain Level 1 structure. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit not seen from any priority travel route or use area. Unit is adjacent to Rio Roberts fish pass. Build parking area for 3-4 vehicles at end of road; from parking area, build a trail to the fish viewing platform. Establish interpretive program to display different types of forestry practices, particularly harvest techniques. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Unit not flagged in field. Maintain 100' buffer on Class I streams on north and south of unit. Access road follows foot trail to fish pass. Consider using unit as a demonstration for harvesting techniques and leave trees because of easy access. Construction of parking lot recommended. Type B clearcut, leaving extra trees along muskeg at northern boundary. Remove mistletoe trees. Mitigation measures include: F4, F5, F8, F10, and W4. | | | |

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

VCU : 596

UNIT : 414

QUAD : C3-NE



- Revised Control Lake Project Boundary
- Post-Field Unit Boundary w/ Setting Codes
- Other Post-Field Unit Boundaries
- USFS Timber Types for Volc 4-7
- Eagle Tree Buffer of 330ft
- Existing & Rebuilt Roads
- F.S. Roads Under Construction
- Post-Field Proposed Roads
- Ahmu-Class 1 & Stream Chantypes
- Ahmu-Class 2 & Stream Chantypes
- Ahmu-Class 3 & Stream Chantypes
- Channel Type Change

- Lakes and Ponds
- Second Growth Units
- MMI 4
- McGilvery > 41
- Landings
- Stream & Lake NoCUT Buffers

May 17, 1994

0.5 MILE

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

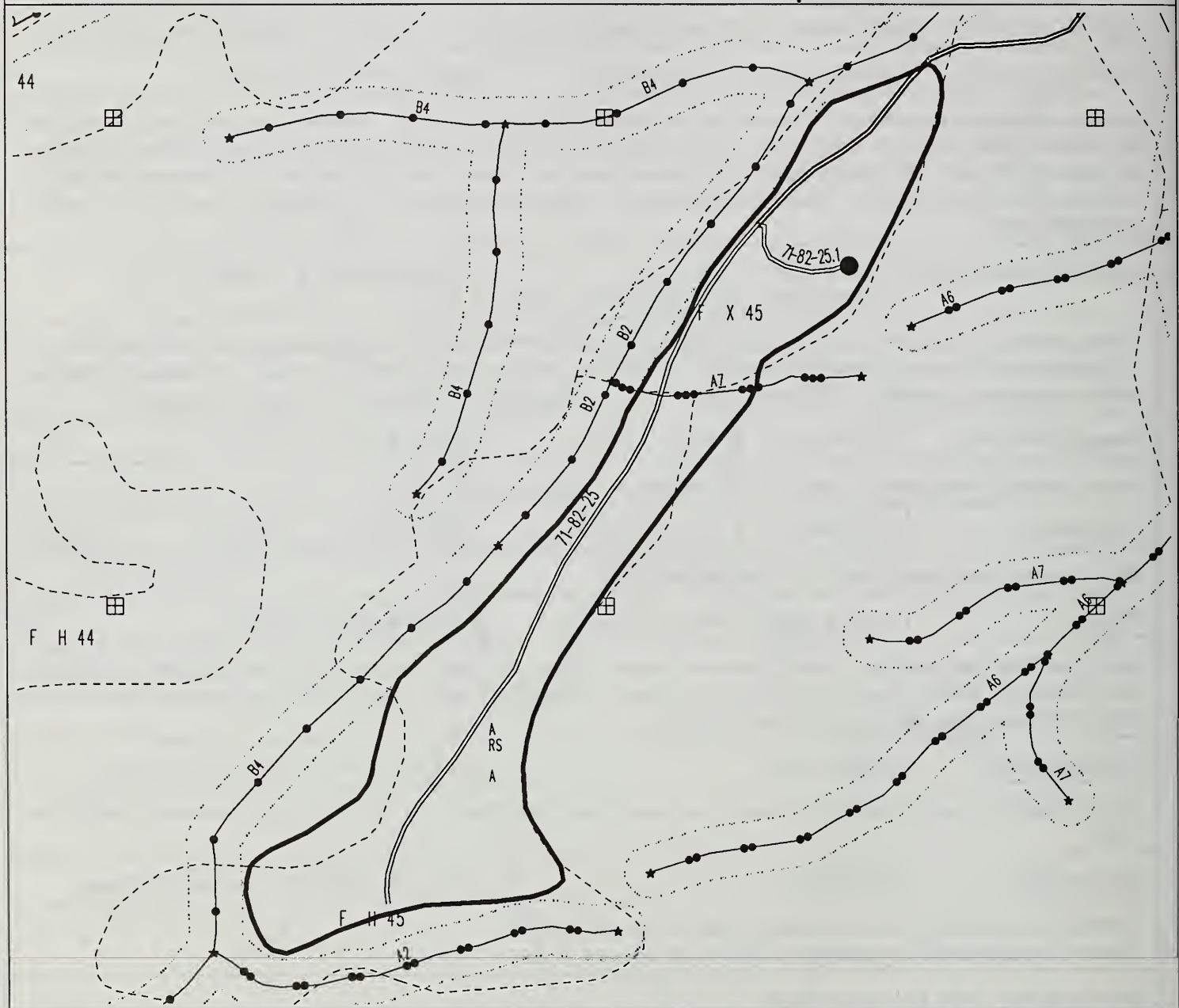
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| VCU #: 596 | UNIT #: 414 | QUARTER QUAD: C3NE | PHOTO YR/#: 1991/1090-125 |
| ACRES: 24.3 | VOL.: 565.3 MBF | LOGGING SYSTEM: Swingyard/Running Skyline | |
| LANDSCAPE ZONE: Unit is within Rio Roberts Watershed. Northern 2/3 of unit is within USFS 30 Road Corridor. | | | |
| Timber/Vegetation | Field Review: M. Case, 6/18/93 | Office Review: J. Goering | |
| Species composition predominantly hemlock and cedar with a few spruce present. Regeneration predominantly hemlock but includes some spruce and a little cedar. Dense understory vegetation. Slope instability/failure potential existing in the center of the unit. Past failure possibly due to soil water movement. Poor regeneration in the center of the unit associated with slope instability. Shallow soils, and poor soil drainage in some areas. Numerous muskegs are located around the unit. | | | |
| Logging/Transportation | Field Review: J. Estabrook/C. Giles/D. Goude, 6/15/93 | Office Review: E. Urstadt | |
| Unit is accessed by Road #71-82-25.2. One short spur is needed. Recommend swing yarding with running skyline. Tailholds are poor except for the SE boundary. Possibly use mobile tailhold in NE part of unit. Deflection is good and partial suspension is possible. A 100 foot stream buffer is along the SW boundary. Fair to good economics. | | | |
| Watershed/Fisheries | Field Review: R. Rogers, 8/17/93 | Office Review: T. Stewart | |
| Stream on west side of unit is Class I 100' no-cut plus 50' selective harvest buffer. | | | |
| Soils/Geology | Field Review: R. Rogers, 6/17/93 | Office Review: T. Stewart | |
| Partial suspend north side of hill due to thin organic soils. | | | |
| Wildlife | Field Review: J. Boyce, 6/17/93 | Office Review: M. Hall | |
| Heavy bear and deer use/sign. Possible bear den present. A few deer beds identified. Bear digs adjacent to muskeg on south boundary. Buffer riparian corridor to west of unit. Recommend level 1 retention of large snags and green trees for snag recruitment along the north and west boundary. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit not seen from any priority travel route or use area. Seen from Road 30 in Middleground. Maximum Modification VQO. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Partial cut unit using seed tree harvest (Type F) to maintain structure, help promote regeneration, reduce pini infection, and to build on selective harvest buffer along creek. Partial suspend north side of hill. 100' no-cut and 50' selective harvest buffer along Class I stream on west side of unit. Mitigation measures for this unit are: F5, F8, F10, and W2. | | | |













CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD







VCU : 596

UNIT : 415

QUAD : C3-NE



-  Revised Control Lake Project Boundary
-  Post-Field Unit Boundary w/ Setting Codes
-  Other Post-Field Unit Boundaries
-  USFS Timber Types for Volc 4-7
-  Eagle Tree Buffer of 330ft
-  Existing & Rebuilt Roads
-  F.S. Roads Under Construction
-  Post-Field Proposed Roads
-  Ahmu-Class 1 & Stream Chantypes
-  Ahmu-Class 2 & Stream Chantypes
-  Ahmu-Class 3 & Stream Chantypes
-  Channel Type Change

-  Lakes and Ponds
 Second Growth Units
 MMI 4
 McGilvery > 41
 Landings
 Stream & Lake NoCUT Buffers

May 17, 1994

.5 MILE

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

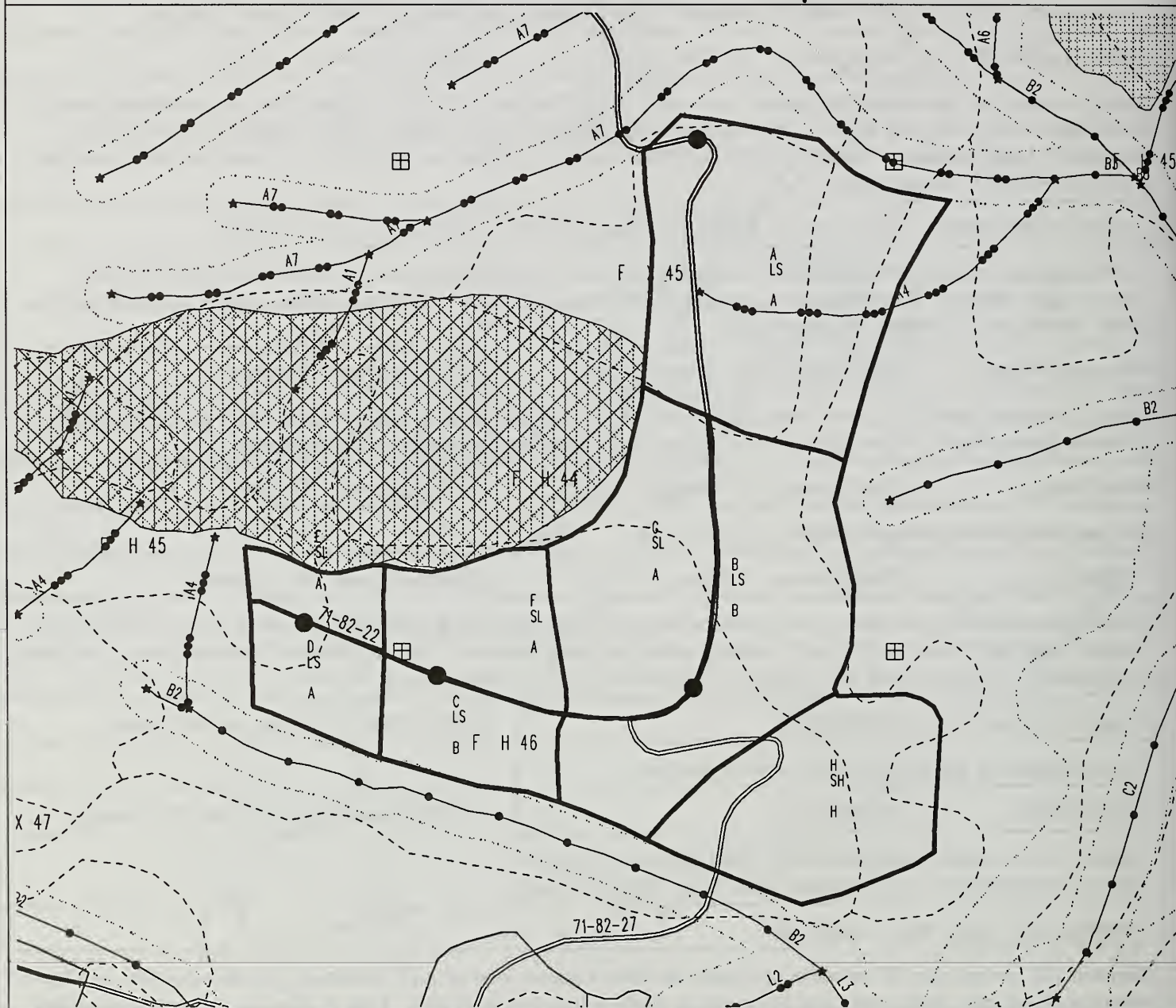
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|---|--|---|---------------------------|
| VCU #: 596 | UNIT #: 415 | QUARTER QUAD: C3NE | PHOTO YR/#: 1991/1090-125 |
| ACRES: 46.9 | VOL.: 1216.1 MBF | LOGGING SYSTEM: Swingyarder/Running Skyline | |
| LANDSCAPE ZONE: Unit is within Rio Roberts Watershed and is just south of USFS 30 Road Corridor. | | | |
| Timber/Vegetation | Field Review: M. Case, 7/3/93 | Office Review: J. Goering | |
| Species composition predominantly hemlock and cedar with a few spruce present. Regeneration predominantly hemlock but includes a few cedar and spruce. Windthrow damage present on the northwest edge. Fairly dense understory vegetation. Light amount of mistletoe infection evident in canopy. Numerous muskegs are located around the unit and associated with low volume timber. | | | |
| Logging/Transportation | Field Review: B. Flatz/S. Field, 7/01/93 | Office Review: K. Jehnke | |
| Unit is accessed by Road #71-82-25 and a short spur. Consider adjusting the junction of this road with USFS 30 to improve sight distance. Recommend swing yarding with running skyline. A 100 foot buffer is along the south and west sides. Partial cut is possible. Fair economics. | | | |
| Watershed/Fisheries | Field Review: B. Romey, 6/17/93 | Office Review: T. Stewart | |
| Class II stream at south end of unit needs 100' buffer. Class I stream flowing along west boundary needs 100' buffer plus 50' select harvest buffer. Class III stream in middle of unit needs split yarding or full suspension. | | | |
| Soils/Geology | Field Review: M. Minnillo, 6/17/93 | Office Review: T. Stewart | |
| Unit has gentle slopes and good stability. No concerns. | | | |
| Wildlife | Field Review: J. Boyce, 6/17/93 | Office Review: R. Fairbanks | |
| Maintain northeast unit boundary on west side of knob (50' from muskeg) down to 600' elevation to avoid bluffs, and maintain some high value snag habitat. Muskeg along southwest boundary. Wolves observed in muskeg along southwest unit boundary. Moderate deer use in unit. Contiguous old-growth; retain Level 1 structure. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit not seen from any priority travel route or use area. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Maintain 100' no-cut plus 50' selective cut buffer on Class I stream west of unit. Maintain 100' no-cut buffer on Class II stream south of unit. Split yard Class III stream in northcentral portion of unit. Type A clearcut. Mitigation measures for this unit are: F5, F6, F8, F10, and W5. | | | |

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

VCU : 596

UNIT : 416

QUAD : C3-NE



- Revised Control Lake Project Boundary
- Post-Field Unit Boundary w/ Setting Codes
- Other Post-Field Unit Boundaries
- USFS Timber Types for Volc 4-7
- Eagle Tree Buffer of 330ft
- Existing & Rebuilt Roads
- F.S. Roads Under Construction
- Post-Field Proposed Roads
- Ahmu-Class 1 & Stream Chatypes
- Ahmu-Class 2 & Stream Chatypes
- Ahmu-Class 3 & Stream Chatypes
- Channel Type Change

- Lakes and Ponds
- Second Growth Units
- MMI 4
- McGilvery > 41
- Landings
- Stream & Lake NoCUT Buffers

.5 MILE

June 09, 1994

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

| | | | |
|--|--|--|---------------------------|
| VCU #: 596 | UNIT #: 416 | QUARTER QUAD: C3NE | PHOTO YR/#: 1991/1090-191 |
| ACRES: 101.3 | VOL.: 2649.8 MBF | LOGGING SYSTEM: Live Skyline - Shotgun, Shovel | |
| LANDSCAPE ZONE: The southeast portion of unit is within the Rio Roberts Corridor, while the remainder is within the Rio Roberts Watershed. | | | |
| Timber/Vegetation | Field Review: T. Stecher, 6/18/93 | Office Review: J. Goering | |
| Species composition predominantly hemlock but includes some spruce and cedar. Regeneration mostly on nurse logs and consists of hemlock. Very steep slope, relatively shallow soils, and poor soil drainage areas within unit. High erosive potential in southwest upper elevation areas due to extreme slope and soil water movement. Consider removing unstable area from harvest. Promote spruce/cedar regeneration through planting. | | | |
| Logging/Transportation | Field Review: C. Barnhart/J. Doyal, 6/14/93 | Office Review: E. Urstadt | |
| A 100' tower with a slackline system will achieve partial suspension. 50% of logging is uphill; 50% is downhill. The southwest corner can be shovel logged. The unit above 900' to 1000' was dropped due to McGilvery soils. Blowdown is not a problem. Partial cut is not recommended. The economics are fair. | | | |
| Watershed/Fisheries | Field Review: J. Knutzen, 6/13/93 | Office Review: G. McNaughton | |
| Class I stream along southern boundary needs no-cut buffer of 100'. Class III stream in north portion of unit does not require split yarding. | | | |
| Soils/Geology | Field Review: R. Rogers, 6/13/93 | Office Review: M. Hall | |
| McGilvery soils above 900' to 950' on steep slope with movement. Keep harvest to 900' level on north, east and west slopes, extends to 1,000' elevation or outcrop on south slope. | | | |
| Wildlife | Field Review: J. Knutzen, 6/13/93 | Office Review: R. Fairbanks | |
| Recommend 100' no-cut buffer along boundary stream to maintain heavy beaver use area; Level 2 structure retention. High deer use in riparian area. Wolf scat observed. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit not seen from any priority travel route or use area. Not seen from Control Lake. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Upper portion of unit excluded due to McGilvery soils. Class I stream along southern boundary requires 100' no-cut buffer. Class III streams in north portion of unit do not require split yarding. Type A clearcut in bulk of unit, Type B clearcut in Rio Roberts Corridor, with Type H shelterwood in southeast portion of unit within Rio Roberts Corridor. Mitigation measures for this unit are: F1, F5, F6, W2, W4, and W5. Unit is only slightly larger than 100 acres, but includes a large portion that will be partial cut. | | | |

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

VCU : 596

UNIT : 417

QUAD : C3-NE



- Revised Control Lake Project Boundary
- Post-Field Unit Boundary w/ Setting Codes
- Other Post-Field Unit Boundaries
- USFS Timber Types for Volc 4-7
- Eagle Tree Buffer of 330ft
- Existing & Rebuilt Roads
- F.S. Roads Under Construction
- Post-Field Proposed Roads
- Ahmu-Class 1 & Stream Chantypes
- Ahmu-Class 2 & Stream Chantypes
- Ahmu-Class 3 & Stream Chantypes
- Channel Type Change

- Lakes and Ponds
- Second Growth Units
- MMI 4
- McGilvery > 41
- Landings
- Stream & Lake NoCUT Buffers

June 09, 1994

.5 MILE

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

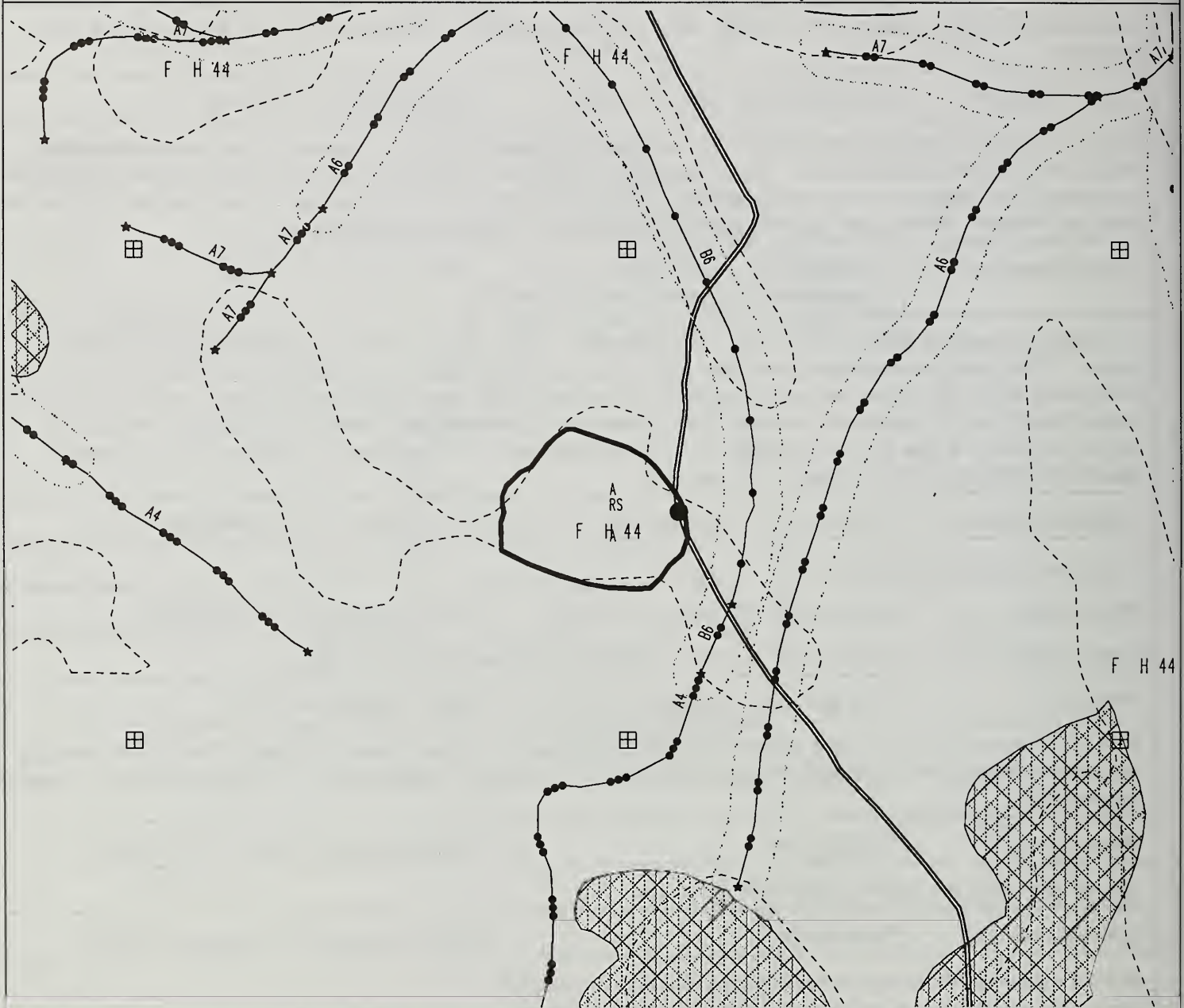
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|--|---|--|---------------------------|
| VCU #: 596 | UNIT #: 417 | QUARTER QUAD: C3NE | PHOTO YR/#: 1991/1090-191 |
| ACRES: 42.8 | VOL.: 1599.1 MBF | LOGGING SYSTEM: Swingyarder/Live Skyline with 100' Tower, Shovel | |
| LANDSCAPE ZONE: Eastern 1/2 of unit is within Rio Roberts Corridor. Western 1/2 of unit is within Rio Roberts Watershed. | | | |
| Timber/Vegetation | Field Review: B. Hasebe, 6/20/93 | Office Review: J. Goering | |
| Species composition predominantly hemlock but includes some spruce and cedar. Regeneration predominantly hemlock with a few spruce but is lacking cedar. Dense understory vegetation. Windthrow damage evident throughout the unit and is associated with shallow soils overlying bedrock. Little to no mistletoe evident in canopy. Steep slope and shallow soils overlying bedrock. Recommend full suspension where possible to minimize soil displacement. | | | |
| Logging/Transportation | Field Review: C. Barnhart/E. Urstadt/B. Flatz, 6/19/93 | Office Review: E. Urstadt | |
| This unit is accessed by Rd #71-82-27. One spur is needed. Three landings will be used. Shovel log the northwest corner. A 100' tower with shotgun system can achieve the required partial suspension for the rest of the unit. A swingyarder can be used along the road in the southwest corner. 100% of the unit is uphill logging. Some tie-backs (or mobile tailhold) will be needed all around the unit. Blowdown is not a problem. Partial cut is possible. West of the flagged unit is a snag area that was excluded due to poor timber and lack of tailholds. It would make a good snag retention/wildlife area. The economics are good. | | | |
| Watershed/Fisheries | Field Review: J. Knutzen, 6/14/93 | Office Review: G. McNaughton | |
| No streams in unit; no concerns. | | | |
| Soils/Geology | Field Review: R. Rogers, 6/14/93 | Office Review: G. McNaughton | |
| Slope sensitive to mass movement; require partial suspension, full suspension is preferable. | | | |
| Wildlife | Field Review: J. Knutzen, 6/14/93 | Office Review: M. Hall | |
| Wolf use in unit and vicinity; heard wolf howls within approximately 1/4 mile of unit. Red-tailed hawk heard. Beaver ponds approximately 400' north and 600' east. Maintain Level 2 structure retention due to a surrounding matrix of natural fragmentation. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit not seen from any priority travel route or use area. V1. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Partial suspension required. Partial cutting not attractive due to windthrow concerns. Type A clearcut plus Type D clearcut leaving trees along irregular eastern unit boundary bordering muskegs below unit. Retain snag area on west-central unit boundary. Maintain 100' buffer on Class II streams at northeast and southeast areas of unit. Mitigation measures for this unit are: F3, F5, F8, F10, W1, and W5. | | | |

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

VCU : 596

UNIT : 418

QUAD : C3-NE



- | | | | |
|--|---|--|-----------------------------|
| | Revised Control Lake Project Boundary | | Lakes and Ponds |
| | Post-Field Unit Boundary w/ Setting Codes | | Second Growth Units |
| | Other Post-Field Unit Boundaries | | MMI 4 |
| | USFS Timber Types for Volc 4-7 | | McGilvery > 41 |
| | Eagle Tree Buffer of 330ft | | Landings |
| | Existing & Rebuilt Roads | | Stream & Lake NoCUT Buffers |
| | F.S. Roads Under Construction | | |
| | Post-Field Proposed Roads | | |
| | Ahmu-Class 1 & Stream Chantypes | | |
| | Ahmu-Class 2 & Stream Chantypes | | |
| | Ahmu-Class 3 & Stream Chantypes | | |
| | Channel Type Change | | |

May 17, 1994

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

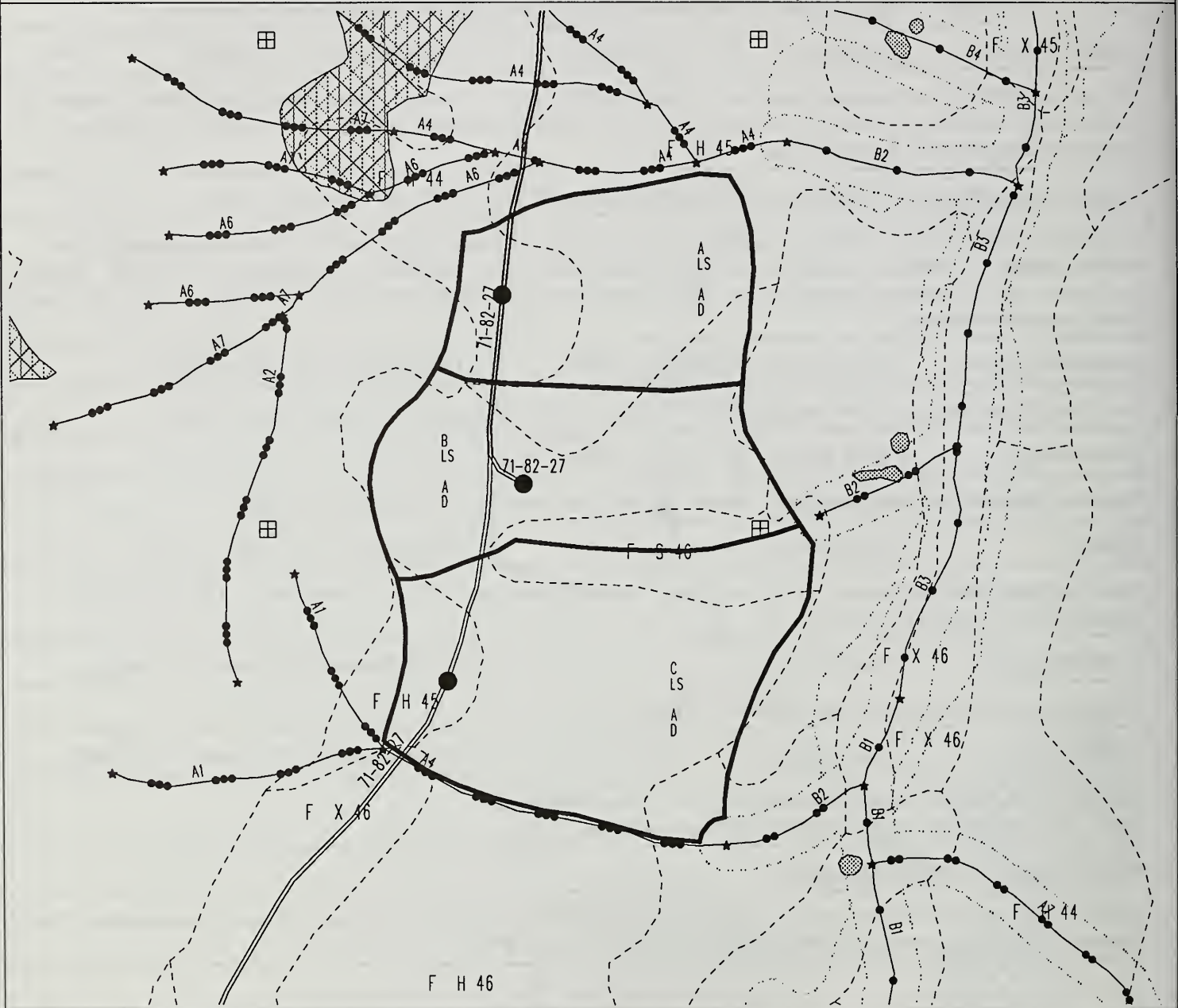
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|--|--|---|---------------------------|
| VCU #: 596 | UNIT #: 418 | QUARTER QUAD: C3NE | PHOTO YR/#: 1991/1090-190 |
| ACRES: 8.3 | VOL.: 93.1 MBF | LOGGING SYSTEM: Swingyarder/Running Skyline | |
| LANDSCAPE ZONE: Unit is outside of Rio Roberts Corridor but within the Rio Roberts Watershed. | | | |
| Timber/Vegetation | Field Review: M. Case, 6/19/93 | Office Review: J. Goering | |
| Species composition predominantly cedar with hemlock; little spruce is present. Regeneration predominantly hemlock but includes cedar and spruce. Muskeg incursions incorporated with mixed species, low volume timber in some areas. Some thin soil, poor soil drainage areas. | | | |
| Logging/Transportation | Field Review: B. Flatz/S. Field, 6/22/93 | Office Review: M. Whitty | |
| Accessed by Rd #71-82-27. There are three options: 1) Modify 10 acre flagged unit to 8 acres and log downhill to marked landing. Swingyard - maximum yarding is approximately 600'. Suspension required but not available. 2) Move road to provide an additional landing in unit. Same conditions as Option #1 except unit is 10 acres. 3) Helicopter log to attain required suspension. | | | |
| Watershed/Fisheries | Field Review: J. Knutzen, 6/14/93 | Office Review: G. McNaughton | |
| One Class IIa stream southeast of unit needs 100' buffer, is greater than 100' from unit boundary already. | | | |
| Soils/Geology | Field Review: R. Rogers, 6/14/93 | Office Review: G. McNaughton | |
| Moderate sensitivity to slope movement. Partial suspension required on steeper portions of unit. | | | |
| Wildlife | Field Review: J. Knutzen, 6/14/93 | Office Review: M. Hall | |
| Heard red-tailed hawk within unit. Wolf use in area - tracks outside unit and howls heard within 1/4 mile of unit. Maintain Level 1 structure retention. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit not seen from any priority travel route or use area. V1. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Maintain 100' buffer on stream to east. Opportunity for possible spur road to top of unit to improve suspension. Type A clearcut. Mitigation measures for this unit are: F5, F8, F10, and W5. | | | |

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

VCU : 596

UNIT : 419

QUAD : C3-NE



- Revised Control Lake Project Boundary
- Post-Field Unit Boundary w/ Setting Codes
- Other Post-Field Unit Boundaries
- USFS Timber Types for Volc 4-7
- Eagle Tree Buffer of 330ft
- Existing & Rebuilt Roads
- F.S. Roads Under Construction
- Post-Field Proposed Roads
- Ahmu-Class 1 & Stream Chantypes
- Ahmu-Class 2 & Stream Chantypes
- Ahmu-Class 3 & Stream Chantypes
- Channel Type Change

- Lakes and Ponds
- Second Growth Units
- MMI 4
- McGilvery > 41
- Landings
- Stream & Lake NoCUT Buffers

.5 MILE

June 09, 1994

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

| | | | |
|---|--|--|---------------------------|
| VCU #: 596 | UNIT #: 419 | QUARTER QUAD: C3NE | PHOTO YR/#: 1991/1090-189 |
| ACRES: 82.0 | VOL.: 3002.5 MBF | LOGGING SYSTEM: Live Skyline/Shotgun System with 100' Tower | |
| LANDSCAPE ZONE: Unit is within the Rio Roberts Corridor. | | | |
| Timber/Vegetation | Field Review: T. Stecher, 6/31/93 | Office Review: J. Goering | |
| Species composition predominantly hemlock with some cedar. Few spruce are present. Regeneration predominantly hemlock with a few spruce but is generally lacking cedar. Alaska yellow cedar decline evident. | | | |
| Logging/Transportation | Field Review: S. Field/B. Flatz, 6/26/93 | Office Review: M. Whitty | |
| Recommend tower with shotgun/live skyline for uphill yarding on 90% of unit. 10% downhill highlead, short yarding. Maximum yarding on uphill is approximately 1,400'. Map profile shows good suspension with T.H. at 2,000'. Excellent economic feasibility. | | | |
| Watershed/Fisheries | Field Review: B. Romey,, 6/23/93 | Office Review: T. Stewart | |
| Stream 1, flagged O/W - directional fall. Stream 2, flagged O/W - directional fall with full suspension. | | | |
| Soils/Geology | Field Review: M. Minnillo, 6/23/93 | Office Review: T. Stewart | |
| Slope instability/failure potential existing due to steep slope and soil water movement. Recent failures evident. Steep slope, relatively shallow soils, and poor soil drainage areas within unit. <u>Geology/Karst (D. Herron/R. Horrocks, 8/23/93):</u> Bedrock identified regionally as greenstone/quartzite. Northern half of unit visited on foot. No limestone present. None present in this area. | | | |
| Wildlife | Field Review: M. Minnillo, 6/23/93 | Office Review: R. Fairbanks | |
| Unit in large previously unentered tract of old-growth; high percent of VC6. Level 1 snag retention. Goose observations in muskeg at south unit boundaries. Beaver pond east of unit. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit not seen from any priority travel route or use area. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Partial cutting unit is not practical due to shallow rocky soils and windthrow potential, logging systems feasibility, and need for helicopter landing of logs from units across the valley. Type A clearcut except a Type D clearcut leaving feathered edge and clumps of trees along lower east boundary building upon Class I buffer and muskeg system. Mitigation measures for this unit are: F6, F8, W1, and W5. | | | |

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

VCU : 596

UNIT : 420

QUAD : C3-NE



- | | | | |
|--|---|--|-----------------------------|
| | Revised Control Lake Project Boundary | | Lakes and Ponds |
| | Post-Field Unit Boundary w/ Setting Codes | | Second Growth Units |
| | Other Post-Field Unit Boundaries | | MMI 4 |
| | USFS Timber Types for Volc 4-7 | | McGilvery > 41 |
| | Eagle Tree Buffer of 330ft | | Landings |
| | Existing & Rebuilt Roads | | Stream & Lake NoCUT Buffers |
| | F.S. Roads Under Construction | | |
| | Post-Field Proposed Roads | | |
| | Ahmu-Class 1 & Stream Chantypes | | |
| | Ahmu-Class 2 & Stream Chantypes | | |
| | Ahmu-Class 3 & Stream Chantypes | | |
| | Channel Type Change | | |

.5 MILE

June 09, 1994

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

| | | | |
|---|---|---|---------------------------|
| VCU #: 596 | UNIT #: 420 | QUARTER QUAD: C3NE | PHOTO YR/#: 1991/1090-189 |
| ACRES: 85.5 | VOL.: 3755.8 MBF | LOGGING SYSTEM: Longspan Skyline | |
| LANDSCAPE ZONE: Unit is adjacent to the Rio Roberts Corridor east of unit and is within the Rio Roberts Watershed. | | | |
| Timber/Vegetation | Field Review: B. Hasebe, 6/30/93 | Office Review: J. Goering | |
| Species composition predominantly hemlock but includes some spruce and cedar. Regeneration predominantly hemlock with a few spruce but is lacking cedar. Alaska yellow cedar decline evident. | | | |
| Logging/Transportation | Field Review: K. Jehnke/K. Martin/J. Spolar, 6/26/93 | Office Review: C. Barnhart | |
| Unit is accessed by Road #71-82-27 and three small stubs to landings. Recommend a 100 foot tower using shotgun system. In the NE part of the unit, use tailhold on ridge to east. This will allow logging a "blind lead" area. Note that a slack pulling carriage and skyline tags may be needed here. A 100 foot buffer is flagged on the SE boundary. Partial suspension can be achieved. Partial cut would be infeasible due to steep slopes. Hanging across TTRA buffers is needed to achieve partial suspension. Good economics. | | | |
| Watershed/Fisheries | Field Review: B. Romey, 6/21/93 | Office Review: T. Stewart | |
| Split yard on both streams within unit with directional fall, full suspension if needed. Directional fall on streams along north boundary. | | | |
| Soils/Geology | Field Review: M. Minnillo, 6/21/93 | Office Review: T. Stewart | |
| Slope instability/failure potential existing due to steep slopes and soil water movement. Recent small sluffs and failures evident on some mid-slope areas. Steep slopes, shallow and rocky soils overlying bedrock, and poor soil drainage areas within unit. | | | |
| Wildlife | Field Review: M. Metzler, 6/21/93 | Office Review: M. Hall | |
| Five young geese observed in muskeg west of unit; yellow legs "alarming" in muskeg. Heard sandhill cranes from muskeg along east boundary. Winter wren/hermit thrush/junco. Maintain upper unit boundary below muskeg. Use road as the upper unit boundary. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit not seen from any priority travel route or use area. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Type A clearcut. Maintain 100' buffers on Class II streams west and south of unit. Split yard and directional fall Class III streams in unit. Directional fall away from streams at northeast boundary. Longspan skyline to achieve suspension needs to protect soils. Mitigation measures for this unit are: F5, F6, W5, and W11. | | | |

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

VCU : 596

UNIT : 421

QUAD : C3-NE



- Revised Control Lake Project Boundary
- Post-Field Unit Boundary w/ Setting Codes
- Other Post-Field Unit Boundaries
- USFS Timber Types for Volc 4-7
- Eagle Tree Buffer of 330ft
- Existing & Rebuilt Roads
- F.S. Roads Under Construction
- Post-Field Proposed Roads
- Ahmu-Class 1 & Stream Chantypes
- Ahmu-Class 2 & Stream Chantypes
- Ahmu-Class 3 & Stream Chantypes
- Channel Type Change

- Lakes and Ponds
- Second Growth Units
- MMI 4
- McGilvery > 41
- Landings
- Stream & Lake NoCUT Buffers

May 17, 1994

.5 MILE

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

| | | | |
|--|---|--|---------------------------|
| VCU #: 596 | UNIT #: 421 | QUARTER QUAD: C3NE | PHOTO YR/#: 1991/1090-127 |
| ACRES: 30.1 | VOL.: 838.4 MBF | LOGGING SYSTEM: Slackline with 70' Tower | |
| LANDSCAPE ZONE: Unit is outside Rio Roberts Corridor but within Rio Roberts Watershed. | | | |
| Timber/Vegetation | Field Review: J. Miller, 7/15/93 | Office Review: J. Goering | |
| Species composition predominantly hemlock but includes cedar and some spruce. Regeneration predominantly hemlock with a few spruce but is lacking cedar. Steep slope, rocky, and shallow soils. Some poor soil drainage areas. | | | |
| Logging/Transportation | Field Review: J. Estabrook/E. Giles/ D. Goude, 7/07/93 | Office Review: C. Barnhart/ E. Ustadt | |
| Dropped southwest 2/3 of paper plan unit and extended remaining area to east approximately 500' to avoid slope instability. Downhill logging, with 70' tower, possibly swingyarder, but more profiles needed. Landing at STA 15+23 has poor guy stumps. Artificial anchors may be required. 2,333' of temporary road, easy construction off of spec. Rd #71-82-25.3. Partial cutting not feasible. Partial suspension is available. | | | |
| Watershed/Fisheries | Field Review: R. Rogers/J. Metzler, 6/16/93 | Office Review: T. Stewart | |
| Directional fall south boundary stream (layout changed from paper plan). 100' buffer for slope instability on Stream 2 bisecting unit (layout changed from paper plan). Split log north treading stream on east to west slope to north (layout changed from paper plan). Split yard and directional fall two Class III streams in west half of unit. | | | |
| Soils/Geology | Field Review: R. Rogers/J. Metzler, 6/16/93 | Office Review: T. Stewart | |
| Extreme slope instability in upper part of original unit. Helicopter log only or drop unit. Unit modified to exclude this area. Achieve partial suspension above 1,000' where slopes are greater than 60%. | | | |
| Wildlife | Field Review: C. Confer, 6/16/93 | Office Review: M. Hall | |
| Wolf tracks identified in north end of unit. Sandhill crane heard northwest of unit. Retain Level 1 structure. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit not seen from any priority travel route or use area. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Southern 2/3 of unit excluded due to unstable slopes, poor deflection, and poor timber. Type A clearcut. Partial suspension available with slackline. Mitigation measures for this unit are: F1, F3, F6, F8, and W5. | | | |

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

VCU : 596

UNIT : 422

QUAD : C3-NE



- Revised Control Lake Project Boundary
- Post-Field Unit Boundary w/ Setting Codes
- Other Post-Field Unit Boundaries
- USFS Timber Types for Volc 4-7
- Eagle Tree Buffer of 330ft
- Existing & Rebuilt Roads
- F.S. Roads Under Construction
- Post-Field Proposed Roads
- Ahmu-Class 1 & Stream Chantypes
- Ahmu-Class 2 & Stream Chantypes
- Ahmu-Class 3 & Stream Chantypes
- Channel Type Change

- Lakes and Ponds
- Second Growth Units
- MMI 4
- McGilvery > 41
- Landings
- Stream & Lake NoCUT Buffers

.5 MILE

June 09, 1994

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

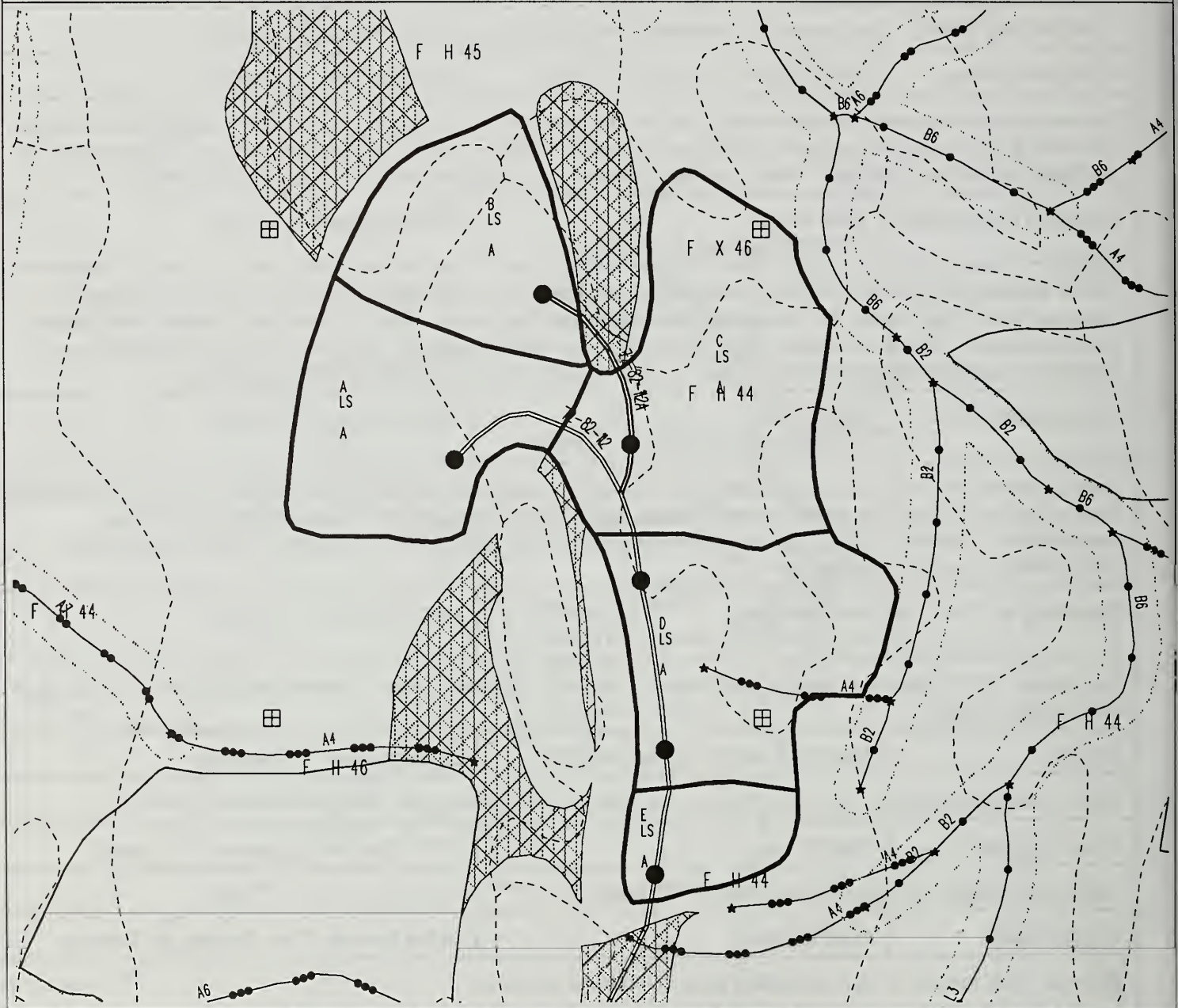
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|---|---|---|---------------------------|
| VCU #: 596 | UNIT #: 422 | QUARTER QUAD: C3NE | PHOTO YR/#: 1991/1090-127 |
| ACRES: 82.2 | VOL.: 4279.8 MBF | LOGGING SYSTEM: Live Skyline Shotgun System with 100' Tower | |
| LANDSCAPE ZONE: Unit outside Rio Roberts Corridor but within the Rio Roberts Watershed. | | | |
| Timber/Vegetation | Field Review: T. Stecher, 6/30/93 | Office Review: J. Goering | |
| Species composition predominantly hemlock but includes some spruce and cedar. Regeneration mostly on nurse logs and consists of hemlock but includes a few spruce and cedar. Alaska yellow cedar decline evident. Rock outcrops on the higher elevations of the unit. Rocky, relatively thin soils and exposed rock. Very high volume timber. | | | |
| Logging/Transportation | Field Review: C. Giles/D. Goude, 6/23/93 | Office Review: K. Jehnke | |
| Unit is accessed by Road #72-82-11A. Recommend 100 foot tower using shotgun system. Additional profiles are suggested before final layout, but it appears partial suspension can be met. Do not partial cut. Feather north edge to reduce blowdown. Good economics. The IDT wants to log settings to north. Engineers have not visited that area. Consider a road from Unit 577-414 to avoid a steep "V" notch that is on north boundary of this unit. | | | |
| Watershed/Fisheries | Field Review: R. Rogers for J. Metzler, 11/08/93 | Office Review: T. Stewart | |
| Stream west of unit is Class I - needs 100' buffer for south setting, but extended to 200' above north setting to maintain bank's stability. Class III V-notch between settings and Class III stream south of southern setting, leave non-merchantable. Stream 2 is Class III - leave nonmerchantable trees within 200' of boundary; selective harvest trees >20" DBH within 100' of boundary. | | | |
| Soils/Geology | Field Review: R. Rogers for J. Metzler, 11/08/93 | Office Review: T. Stewart | |
| Steep slopes (60%) with local areas of 80% slopes, rock cliffs in center of unit. Achieve partial suspension throughout both settings of unit. | | | |
| Wildlife | Field Review: C. Confer, 6/16/93 | Office Review: R. Fairbanks | |
| Level 1 structure retention. Sapsucker heard; cavity(ies) observed within unit. No other wildlife concerns. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit not seen from any priority travel route or use area. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Potential difficulty in selectively harvesting along V-notch in places. Instead, a 50' nonmerchantable feathered edge is obtainable but with a sacrifice to suspension - leave patch of timber along V-notch where red-tailed hawks are nesting near stand (sample Plot 6). Type A clearcut but leave trees as noted under Watershed/Fisheries. Southern part of unit flagged. North part of unit is not flagged, but received resource field reconnaissance and is included as part of unit. Final layout of this north setting should review logging system feasibility and road placement above V-notch from unit to the south. Mitigation measures for this unit are: F5, F6, and W5. | | | |

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

VCU : 596

UNIT : 423

QUAD : C3-NE



- Revised Control Lake Project Boundary
- Post-Field Unit Boundary w/ Setting Codes
- Other Post-Field Unit Boundaries
- USFS Timber Types for Volc 4-7
- Eagle Tree Buffer of 330ft
- Existing & Rebuilt Roads
- F.S. Roads Under Construction
- Post-Field Proposed Roads
- Ahmu-Class 1 & Stream Chantypes
- Ahmu-Class 2 & Stream Chantypes
- Ahmu-Class 3 & Stream Chantypes
- Channel Type Change

- Lakes and Ponds
- Second Growth Units
- MMI 4
- McGilvery > 41
- Landings
- Stream & Lake NoCUT Buffers

.5 MILE

May 17, 1994

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

| | | | |
|---|--|---|---------------------------|
| VCU #: 596 | UNIT #: 423 | QUARTER QUAD: C3NE | PHOTO YR/#: 1991/1090-189 |
| ACRES: 88.2 | VOL.: 2995.8 MBF | LOGGING SYSTEM: Live Skyline | |
| LANDSCAPE ZONE: Unit is mostly outside Rio Roberts Corridor and within Rio Roberts Watershed. | | | |
| Timber/Vegetation | Field Review: B. Hedin, 6/31/93 | Office Review: J. Goering | |
| Species composition predominantly hemlock and cedar with a few spruce present. Regeneration predominantly hemlock but includes a few cedar and spruce. Alaska yellow cedar decline evident. McGilvery soils present on steeper slopes. Rock outcrops, rocky, relatively thin soils and exposed rock present. Muskeg incursions incorporated with mixed species, low volume timber in the northwest portion. | | | |
| Logging/Transportation | Field Review: H. Wilcox/C. Giles, 7/08/93 | Office Review: K. Jehnke | |
| Unit is accessed by Road #72-82-11.2 and a short spur. Use a 100 foot tower with shotgun system. The area in center-north was excluded because the required suspension could not be achieved. Tailholds along muskegs in the bottom of the unit are poor; use tie-backs or a mobile tailhold. Suggest moving SE boundary north to O/W flagged split-yard stream, due to lack of deflection. Do not partial cut due to steep slopes and blowdown concerns. | | | |
| Watershed/Fisheries | Field Review: J. Metzler, 6/30/93 | Office Review: T. Stewart | |
| Three class 3 streams in unit that deliver to a Class 1 east of the unit. Directional fall and split yard to reduce disturbance to channel banks. | | | |
| Soils/Geology | Field Review: J. Metzler 6/30/93 | Office Review: T. Stewart | |
| Several small, vegetated slumps in unit despite slopes < 65%. Till layer exposed at 1,200' appears to be source of instability along lower end of slope. Achieve at least partial suspension. Area of bluffs and shallow organic soils in northern end of unit - minimize disturbance with full suspension or exclude from unit. | | | |
| Wildlife | Field Review: S. Tanguay, 6/30/93 | Office Review: M. Hall | |
| Large muskeg complex to east and west adjacent to unit. Buffer this by moving boundary east. Tree cavities observed; potential bear dens and fisher dens (scratch trail leading to one cavity). Observed woodpecker(s). Retain Level 1 structure. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit not seen from any priority travel route or use area. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| North-central portion of unit excluded due to bluffs and McGilvery soils. Maintain 100' no-cut buffer along Class I stream on northeast corner of unit. Type A clearcut - shallow rocky soils over bedrock and high blowdown observed. Partial suspension is available with live skyline system. Directional falling and full suspension is required to mitigate potential slide area adjacent to Class III stream in Setting D. Mitigation measures for this unit are: F1, F5, F6, F8, and W5. | | | |

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

VCU : 596

UNIT : 424

QUAD : C3-NE



- Revised Control Lake Project Boundary
- Post-Field Unit Boundary w/ Setting Codes
- Other Post-Field Unit Boundaries
- USFS Timber Types for Volc 4-7
- Eagle Tree Buffer of 330ft
- Existing & Rebuilt Roads
- F.S. Roads Under Construction
- Post-Field Proposed Roads
- Ahmu-Class 1 & Stream Chantypes
- Ahmu-Class 2 & Stream Chantypes
- Ahmu-Class 3 & Stream Chantypes
- Channel Type Change

- Lakes and Ponds
- Second Growth Units
- MMI 4
- McGilvery > 41

- Landings
- Stream & Lake NoCUT Buffers

.5 MILE

May 17, 1994

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

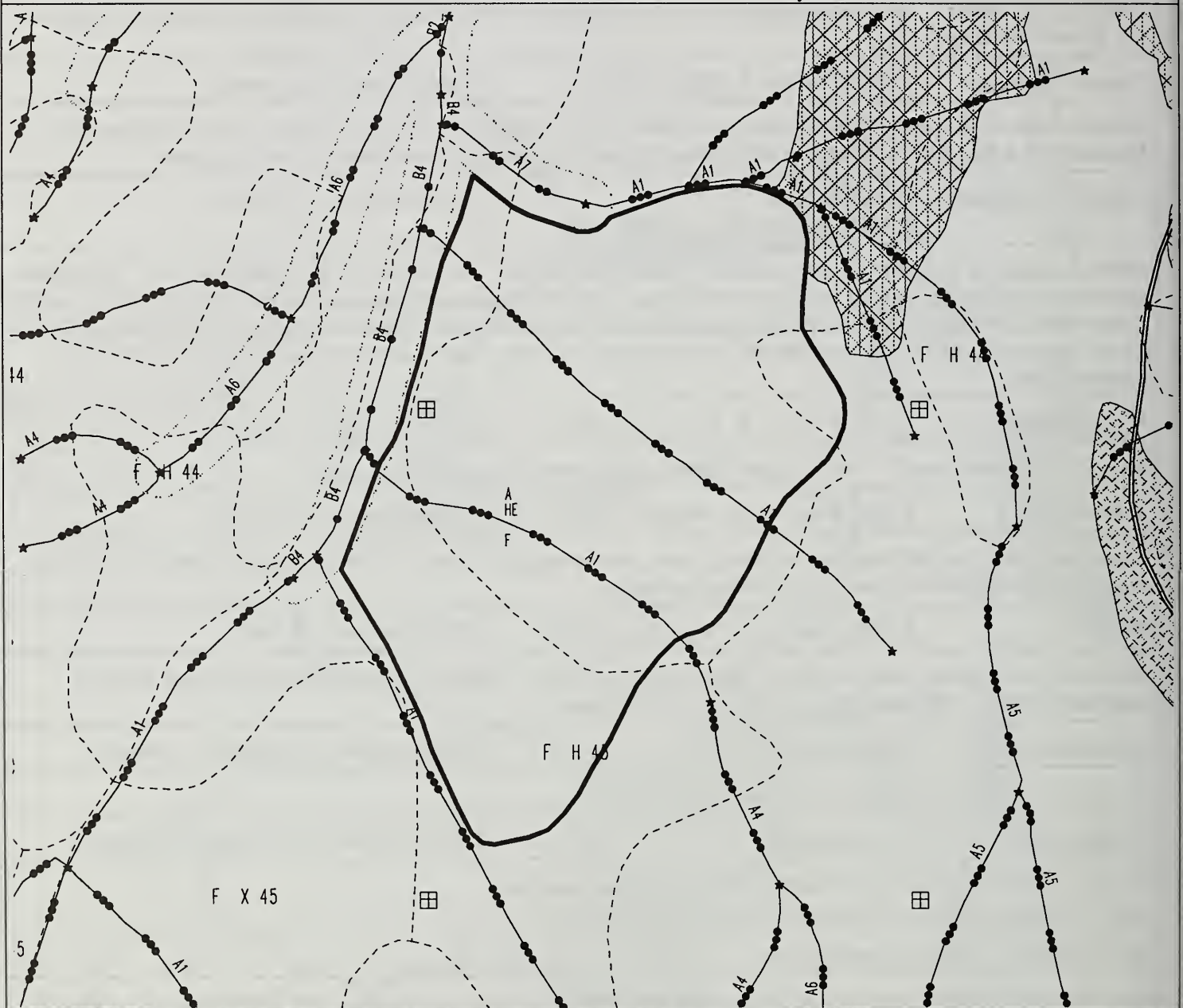
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|--|--|---|---------------------------|
| VCU #: 596 | UNIT #: 424 | QUARTER QUAD: C3NE | PHOTO YR/#: 1991/1090-188 |
| ACRES: 74.6 | VOL.: 2033.0 MBF | LOGGING SYSTEM: Helicopter | |
| LANDSCAPE ZONE: The western half of the unit is within the Rio Roberts Corridor and the entire unit is within the Rio Roberts Watershed. | | | |
| Timber/Vegetation | Field Review: J. Miller, 7/8/93 | Office Review: J. Goering | |
| Species composition predominantly hemlock with some spruce. Regeneration mostly on nurse logs and consists of hemlock with a few spruce. Rocky, relatively thin soils and exposed rock. Some poor soil drainage areas. | | | |
| Logging/Transportation | Field Review: H. Wilcox/C. Giles, 7/10/93 | Office Review: E. Urstadt | |
| Unit is accessed by Road #72-82-11.3 (marked 72-82-11.2A in field). Unit as laid out is a swing yard unit. Blind leads would not allow harvest of most of the unit to the west. The IDT suggests to helicopter log this unit. If cable logged, the timber west of this unit would require the construction of a long access road. Helicopter logging will eliminate the need for the long access road. See Unit 596-425. Fair economics. Note: Timber to west of unit can be included in this helicopter unit. | | | |
| Watershed/Fisheries | Field Review: B. Romey, 7/06/93 | Office Review: T. Stewart | |
| Stream 1 and 2 are Class III - use as unit boundary. Directional fall away from streams. | | | |
| Soils/Geology | Field Review: M. Minnillo, 7/06/93 | Office Review: T. Stewart | |
| Upper half of unit has field verified McGilvery soils. Full suspension required. If full suspension cannot be achieved, then unit to be dropped or lower portion helicopter logged. | | | |
| Wildlife | Field Review: M. Minnillo, 7/06/93 | Office Review: M. Hall | |
| High deer cover, forage, and travel area. Brown creeper observed. Retain Level 1 structure (good snag density in neighboring stand). Goshawk survey conducted - no detections. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit not seen from any priority travel route or use area. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Unit will be helicopter yarded to Unit 596-419 due to soil and road building concerns. 100' buffer required on Class II stream in western part of unit. Split yard Class III stream in unit. Opportunity for expanding unit downslope to Class I stream buffer (not flagged in field). This would eliminate need for highlead system and road to access this timber. Seed tree (Type F) cut leaving spruce and all unmerchantable trees. Mitigation measures for this unit are: F1, F2, F3, F6, and W2. | | | |

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

VCU : 596

UNIT : 425

QUAD : C3-NE



- Revised Control Lake Project Boundary
- Post-Field Unit Boundary w/ Setting Codes
- Other Post-Field Unit Boundaries
- USFS Timber Types for Volc 4-7
- Eagle Tree Buffer of 330ft
- Existing & Rebuilt Roads
- F.S. Roads Under Construction
- Post-Field Proposed Roads
- Ahmu-Class 1 & Stream Chontypes
- Ahmu-Class 2 & Stream Chontypes
- Ahmu-Class 3 & Stream Chontypes
- Chonnel Type Change

- Lakes and Ponds
- Second Growth Units
- MMI 4
- McGilvery > 41
- Landings
- Stream & Lake NoCUT Buffers

.5 MILE

May 17, 1994

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

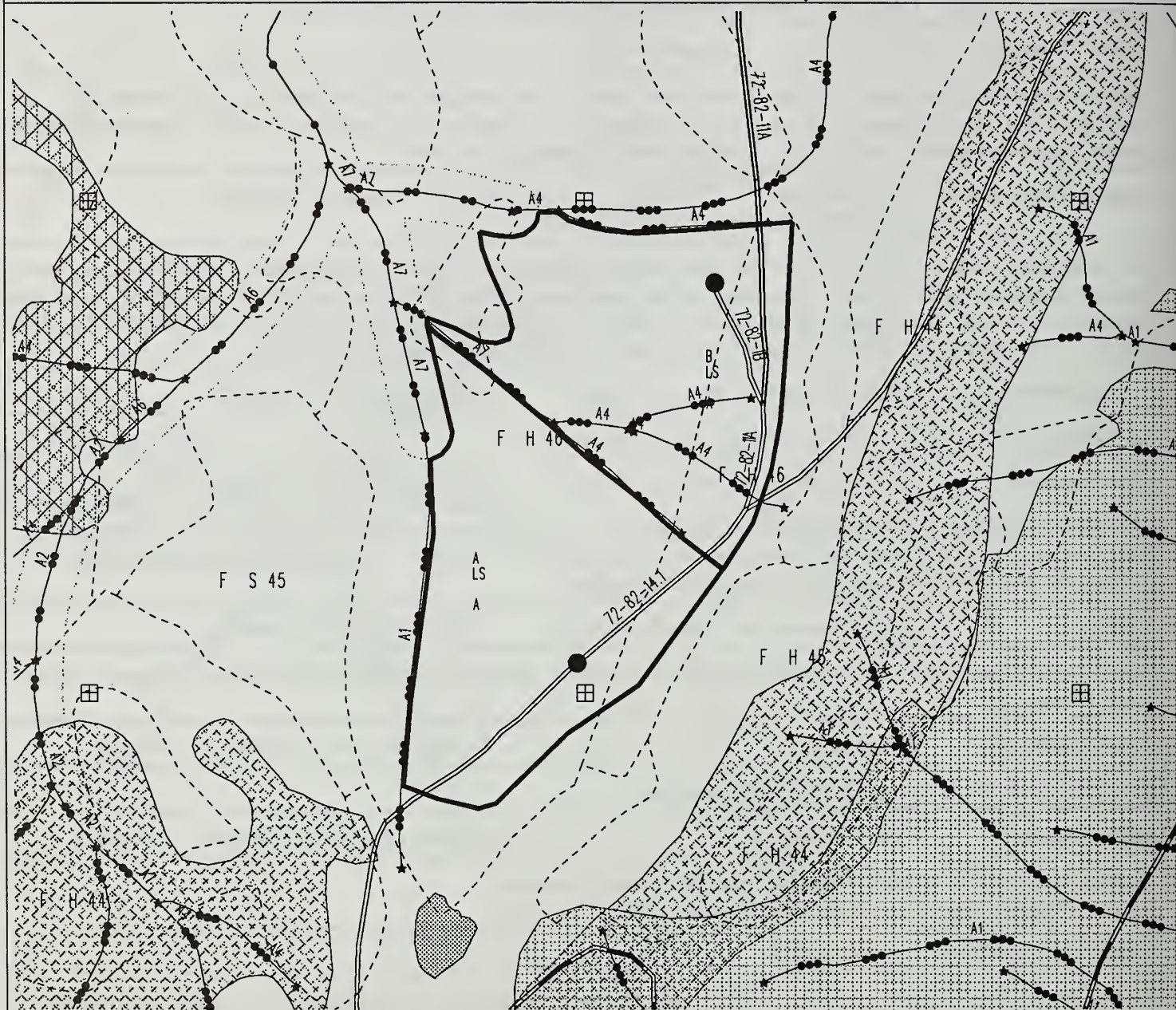
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|---|--|---|---------------------------|
| VCU #: 596 | UNIT #: 425 | QUARTER QUAD: C3NE | PHOTO YR/#: 1991/1090-188 |
| ACRES: 79.0 | VOL.: 3932.2 MBF | LOGGING SYSTEM: Helicopter | |
| LANDSCAPE ZONE: Unit in Rio Roberts Watershed; western half in Rio Roberts Corridor. | | | |
| Timber/Vegetation | Field Review: B. Hasebe, 7/10/93 | Office Review: J. Goering | |
| Species composition predominantly hemlock with some spruce. Regeneration mostly on nurse logs and consists of hemlock. Deep V-notches present. Some poor soil drainage areas. Shallow soils overlying bedrock. Windthrow damage present in middle portion of unit. Rocky, relatively thin soils and exposed rock. | | | |
| Logging/Transportation | Field Review: H. Wilcox/C. Giles, 7/13/93 | Office Review: E. Urstadt | |
| Unit is accessed by Road #72-82-11.2A. The road crosses V-notches and stops at an impassible V-notch. The unit was reduced in size due to blind leads. Unit is laid out for swing yarder. The IDT noted the difficult roading and the fact that timber to west would need a long road to access it. The IDT recommends helicopter logging (to Unit 596-420). See Unit 596-424. Fair economics. Note: Timber to west of unit can be included if helicopter logged. | | | |
| Watershed/Fisheries | Field Review: B. Romey, 7/06/93 | Office Review: T. Stewart | |
| All streams are Class III - V-notches, O/W split yard, full suspend. | | | |
| Soils/Geology | Field Review: M. Minnillo, 7/06/93 | Office Review: T. Stewart | |
| Full suspension required due to steep, rocky unstable slopes. If full suspension cannot be achieved then recommend helicopter logging. This would also prevent crossing deep unstable V-notches, or could possibly bring road in from bottom; but this would still leave the full suspension a problem. | | | |
| Wildlife | Field Review: M. Minnillo, 7/06/93 | Office Review: R. Fairbanks | |
| Good deer and bear cover. Recommend feathering unit edges to help prevent windthrow after canopy is opened. Retain Level 1 structure. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit not seen from any priority travel route or use area. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Portion of unit that was in Rio Roberts Corridor was not flagged in the field due to impassible V-notch to road across and poor deflection. Directionally fall trees away from Class III streams. These areas were not originally flagged in field. Since unit is now being helicopter logged, original southern area of unit on other side of V-notch can be included (but is in Rio Roberts Corridor). This would eliminate need for road across V-notch and highlead system which would be poor for partial cutting. This area is within Rio Roberts Corridor. Type F seed tree cut, leaving spruce, using helicopter yarding to Unit 596-420 and leaving all unmerchantable trees. Mitigation measures include: F2, F6, and W2. | | | |

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

VCU : 596

UNIT : 426

QUAD : C3-NE



- | | | | |
|--|---|--|-----------------------------|
| | Revised Control Lake Project Boundary | | Lakes and Ponds |
| | Post-Field Unit Boundary w/ Setting Codes | | Second Growth Units |
| | Other Post-Field Unit Boundaries | | MMI 4 |
| | USFS Timber Types for Volc 4-7 | | McGilvery > 41 |
| | Eagle Tree Buffer of 330ft | | Landings |
| | Existing & Rebuilt Roads | | Stream & Lake NoCUT Buffers |
| | F.S. Roads Under Construction | | |
| | Post-Field Proposed Roads | | |
| | Ahmu-Class 1 & Stream Chantypes | | |
| | Ahmu-Class 2 & Stream Chantypes | | |
| | Ahmu-Class 3 & Stream Chantypes | | |
| | Channel Type Change | | |

.5 MILE

June 09, 1994

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

| | | | |
|--|---|--|---------------------------|
| VCU #: 596 | UNIT #: 426 | QUARTER QUAD: C3NE | PHOTO YR/#: 1991/1090-188 |
| ACRES: 59.3 | VOL.: 1624.2 MBF | LOGGING SYSTEM: Live Skyline Shotgun with 100' Tower | |
| LANDSCAPE ZONE: Unit is within Rio Roberts Watershed but outside Rio Roberts Corridor. | | | |
| Timber/Vegetation | Field Review: M. Case/S. Karstens, 6/30/93 | Office Review: J. Goering | |
| Species composition predominantly hemlock with some spruce. Very poor regeneration composed of hemlock with a few spruce. Steep slope, rocky, relatively shallow soils, and poor soil drainage areas within unit. Regeneration concerns due to shallow rocky soils and the presence of dense salmonberry. Consider partial retention/shelter wood harvest to promote regenerative success and desirable species composition. | | | |
| Logging/Transportation | Field Review: J. Estabrook/C. Giles/D. Keister | Office Review: J. Doyal/E. Urstadt, 9/23/93 | |
| Use a large (100') tower with shotgun/highlead or slack line system. Maximum yarding distance is approximately 1,400' with 90% being uphill yarded. Partial suspension could be achieved in most areas, but is not required. Blowdown is not a problem. Partial cut is possible. 250' of Class I buffer enters into northwest unit boundary. The boundary on stream on north boundary may need a 100' buffer; check during final layout. The unit economics are fair. | | | |
| Watershed/Fisheries | Field Review: E. Ablow, 6/23/93 | Office Review: T. Stewart | |
| Stream 1 is a Class III, A1, channel forming the western boundary of the unit. Side slopes for 200' to 300' along the stream are highly unstable with pistol butted trees. Harvest to slope break and add 30' to 50' buffer outside slope break in unstable areas. Stream 2 is a Class III, A4, stream channel that flows through the middle of the unit. Streams 3a and 3b are A4. Class III streams bisect the unit; they merge into one stream near the northwestern boundary. It is recommended to harvest trees to slope break. Stream 4, a Class II (A7) that changes to a Class III (A4), forms the northern boundary. <u>The Class II segment of the stream requires a 100' buffer. There is a fish barrier that marks the beginning of the Class III portion of the stream.</u> This requires harvest to slope break. | | | |
| Soils/Geology | Field Review: E. Ablow, 6/23/93 | Office Review: T. Stewart | |
| On the eastern side in the center of the unit there are pistol-butted and fallen trees. The soil is wet; there are a lot of seeps in the area. Slopes are approximately 60% (in center of unit). The rest of the unit slope averages 45% to 50%, stable and has no concerns. | | | |
| Wildlife | Field Review: H. Sloan, 6/23/93 | Office Review: M. Hall | |
| 100' buffer east of pond. Pond is outside of unit boundary, however the proposed road runs close to pond. High Vancouver Canada geese use documented. Level 1 structure retention. Goshawk audio and visual detections within unit twice. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit not seen from any priority travel route or use area. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Goshawk survey required before final layout to determine if nesting occurs in unit. A large concern exists for regenerating this unit due to very poor existing regeneration and dense salmonberry. Partial suspension is required and is available for this unit. This unit should be monitored for regeneration with possible hand planting of large stock (possible KV unit). Type A clearcut. Leave island opportunity between two parallel split yard streams. Mitigation measures for this unit are: F5, F6, F7, F8, W5, W9, and W11. | | | |

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

VCU : 597.1

UNIT : 401

QUAD : C3-NE



- Revised Control Lake Project Boundary
- Post-Field Unit Boundary w/ Setting Codes
- Other Post-Field Unit Boundaries
- USFS Timber Types for Volc 4-7
- Eagle Tree Buffer of 330ft
- Existing & Rebuilt Roads
- F.S. Roads Under Construction
- Post-Field Proposed Roads
- Ahmu-Class 1 & Stream Chantypes
- Ahmu-Class 2 & Stream Chantypes
- Ahmu-Class 3 & Stream Chantypes
- Channel Type Change

- Lakes and Ponds
- Second Growth Units
- MMI 4
- McGilvery > 41
- Landings
- Stream & Lake NoCUT Buffers

.5 MILE

August 03, 1994

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

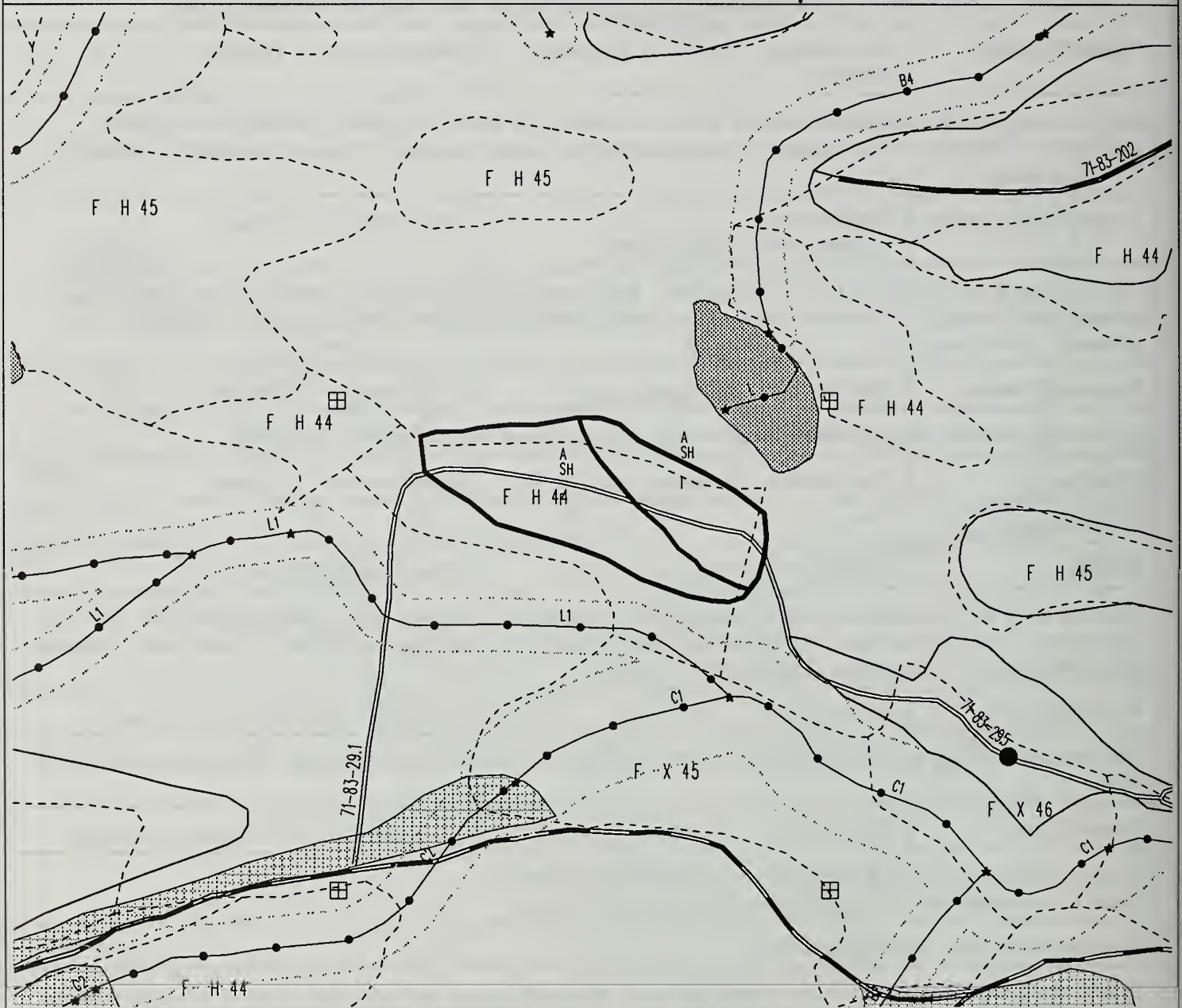
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|---|---|--|--------------------------|
| VCU #: 597 | UNIT #: 401 | QUARTER QUAD: C3NE | PHOTO YR/#: 1991/1090-26 |
| ACRES: 43.8 | VOL.: 1432.6 MBF | LOGGING SYSTEM: Swingyarder/Running Skyline/Highlead | |
| LANDSCAPE ZONE: Unit is in the Drumlin field, proposed Honker Block, and the 30-Road Corridor. | | | |
| Timber/Vegetation | Field Review: J. Miller/S. Karstens, 6/22/93 | Office Review: J. Goering | |
| Species composition predominantly hemlock with some cedar. Few spruce are present. Predominantly hemlock regeneration. Moderate to high amounts of mistletoe infection evident in canopy. Promote spruce/cedar regeneration through planting. | | | |
| Logging/Transportation | Field Review: J. Estabrook/C. Giles, 6/14/93 | Office Review: K. Jehnke | |
| Unit is accessed by Road #71-83-30.1 and one spur. Recommend swing yarding with running skyline. One hundred percent uphill yarding. Lift trees will be needed to avoid potential blind leads. Partial suspension will likely not be achieved. Good economics. | | | |
| Watershed/Fisheries | Field Review: J. Knutzen, 6/11/93 | Office Review: T. Stewart | |
| No streams, however, lake west of unit requires 100 foot no-cut and 400 foot selective cut buffer. | | | |
| Soils/Geology | Field Review: R. Rogers, 6/11/93 | Office Review: T. Stewart | |
| No concerns. | | | |
| Wildlife | Field Review: J. Knutzen, 6/11/93 | Office Review: M. Hall | |
| Fall trees away from muskegs borderline unit on north, northeast and northeast. Low to moderate deer use - deer and fawn observed. Some bear sign. Split yard/directional fall away from muskeg north of unit. Retain Level 2 structure due to adjacent HCC's and natural fragmentation in matrix. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit not seen from any priority travel route or use area. Seen from Road 30 in Foreground. Maximum Modification VQO. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Type G shelterwood cut leaving 10 to 15 trees per acre. Maximize spruce and cedar leave trees to minimize mistletoe infection. Along southwest side of unit leave advanced regeneration to screen view from road. Design spur road entry to prevent direct line of sight view into unit from 30 Road. Type B clearcut northwest setting using highlead. West part of setting A requires a 100 foot no-cut and 400 foot Type I selective cut from lakes due west of unit. Mitigation measures for this unit include: F5, F8, W2, and W4. | | | |

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

VCU : 597.1

UNIT : 402

QUAD : C3-NE



- Revised Control Lake Project Boundary
- Post-Field Unit Boundary w/ Setting Codes
- Other Post-Field Unit Boundaries
- USFS Timber Types for Volc 4-7
- Eagle Tree Buffer of 330ft
- Existing & Rebuilt Roads
- F.S. Roads Under Construction
- Post-Field Proposed Roads
- Ahmu-Class 1 & Stream Chantypes
- Ahmu-Class 2 & Stream Chantypes
- Ahmu-Class 3 & Stream Chantypes
- Channel Type Change

- Lakes and Ponds
- Second Growth Units
- MMI 4
- McGilvery > 41

- Landings
- Stream & Lake NoCUT Buffers

May 17, 1994

.5 MILE

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

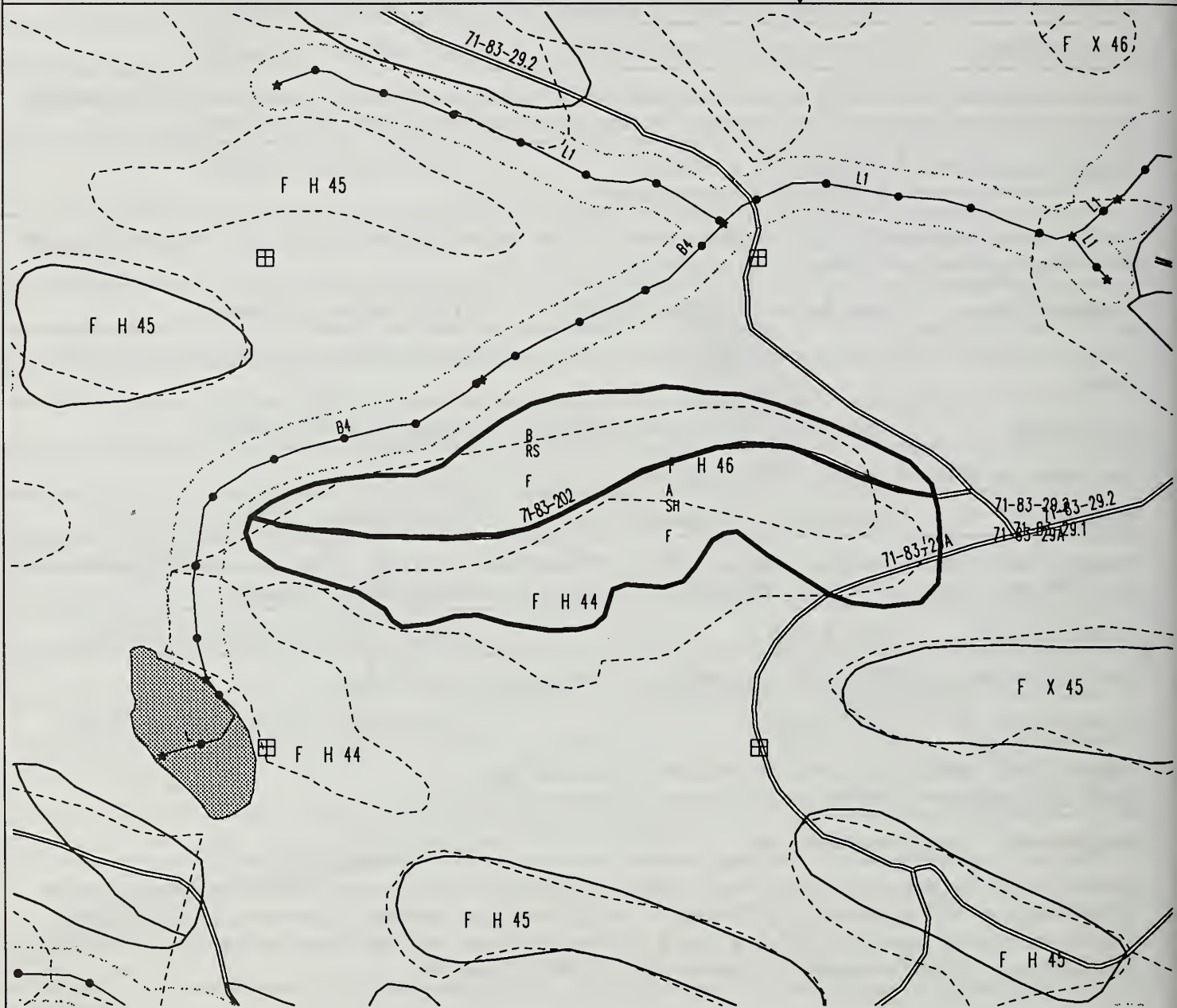
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| VCU #: 597 | UNIT #: 402 | QUARTER QUAD: C3NE | PHOTO YR/#: 1991/1090-27 |
| ACRES: 14.3 | VOL.: 472.2 MBF | LOGGING SYSTEM: Shovel | |
| LANDSCAPE ZONE: Unit is in the Drumlin field, proposed Honker Block, and the 30-Road Corridor. | | | |
| Timber/Vegetation | Field Review: G. Hedin, 6/23/93 | Office Review: J. Goering | |
| Species composition predominantly hemlock with some cedar. Predominantly hemlock regeneration. Low to moderate amounts of mistletoe infection evident in canopy. Promote spruce/cedar regeneration through planting. | | | |
| Logging/Transportation | Field Review: C. Barnhart/ K. Martin/B. Wilkinson, 6/15/93 | Office Review: K. Martin | |
| Unit is accessed by Road #71-83-29.1 which is a USFS "P"-line. Shovel log entire unit to road. Partial cut is possible. No blowdown problems are foreseen. Fair economics. | | | |
| Watershed/Fisheries | Field Review: B. Romey, 8/04/93 | Office Review: T. Stewart | |
| Stream 1 is Class I - B/W, 100' no-cut buffer. Class I lake to northeast requires 100' no-cut plus 400' selective cut buffer. | | | |
| Soils/Geology | Field Review: M. Minnillo, 8/04/93 | Office Review: T. Stewart | |
| Low slopes, generally a dry site; no stability concerns. | | | |
| Wildlife | Field Review: M. Minnillo, 8/04/93 | Office Review: M. Hall | |
| Snags will also be retained in stream and pond buffers. Moderate deer use in unit. Active beaver pond northeast of unit; beaver observed. Retain Level 1 structure - pond and stream buffers will maintain some structure. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit not seen from any priority travel route or use area. Unit is visible from 30 Road. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Maintain 100' no-cut buffer for Class I stream on south side of unit and 100' no-cut and 400' Type I selective harvest buffer from lake. Unit is screened from 30 Road by two different Class I buffers and intervening forest. Maintain structure and promote regeneration by using Type F seed tree cut leaving cedar and spruce and selecting mistletoed hemlock to cut. Mitigation measures for this unit are: F5, F8, F10, and W2. | | | |

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

VCU : 597.1

UNIT : 403

QUAD : C3-NE



- Revised Control Lake Project Boundary
- Post-Field Unit Boundary w/ Setting Codes
- Other Post-Field Unit Boundaries
- USFS Timber Types for Volc 4-7
- Eagle Tree Buffer of 330ft
- Existing & Rebuilt Roads
- F.S. Roads Under Construction
- Post-Field Proposed Roads
- Ahmu-Class 1 & Stream Chantypes
- Ahmu-Class 2 & Stream Chantypes
- Ahmu-Class 3 & Stream Chantypes
- Channel Type Change

- Lakes and Ponds
- Second Growth Units
- MMI 4
- McGilvery > 41
- Landings
- Stream & Lake NoCUT Buffers

March 20, 1995

.5 MILE

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

| | | | |
|---|--|--|--------------------------|
| VCU #: 597 | UNIT #: 403 | QUARTER QUAD: C3NE | PHOTO YR/#: 1991/1090-26 |
| ACRES: 41.8 | VOL.: 882.1 MBF | LOGGING SYSTEM: Swingyard, Running Skyline, Shovel | |
| LANDSCAPE ZONE: Unit is in Drumlin field and the proposed Honker Block. | | | |
| Timber/Vegetation | Field Review: B. Hedin, 8/9/93 | Office Review: J. Goering | |
| Species composition predominantly hemlock and cedar. Predominantly hemlock regeneration. Moderate to high amounts of mistletoe infection evident in canopy. Promote spruce/cedar regeneration through planting. Harvest all mistletoe infected hemlock and cut infected regeneration. | | | |
| Logging/Transportation | Field Review: K. Martin/B. Flatz, 8/25/93 | Office Review: J. Doyal | |
| Unit is accessed by Road #71-83-20.2. Recommend swing yarding the north half of the unit and shovel logging the south half. Partial cut is feasible. Tailholds for the swing yarder will need tie-backs or a mobile tailspar. The NW boundary has a 200 foot stream buffer. Fair economics. | | | |
| Watershed/Fisheries | Field Review: B. Romey, 8/04/93 | Office Review: T. Stewart | |
| Stream 1 is Class I - B/W, 150' no-cut plus 50' selective cut buffer. Stream 2 (lake) is Class I - B/W, 100' no-cut plus 400' selective cut buffer. | | | |
| Soils/Geology | Field Review: M. Minnillo, 8/04/93 | Office Review: T. Stewart | |
| Low slopes, generally a dry site; no stability concerns. | | | |
| Wildlife | Field Review: M. Minnillo, 8/04/93 | Office Review: M. Hall | |
| Recommend deleting the west end of unit along beaver pond since lake is to be buffered. If timber above buffer is cut, there is high probability that windthrow will occur blowing down lake buffer. Snags will be maintained in stream and lake buffers. High deer use area. Drop portion of unit along beaver pond to provide cover for highly traveled deer/bear area and to prevent windthrow at lake buffer. Retain Level 1 structure. Avoid disturbance of wintering trumpeter swans by avoiding all human activity within 0.5 mile of known swan wintering areas during October 15 through March 15. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit not seen from any priority travel route or use area. V1. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Maintain 150' no cut plus 50' selective cut Type I buffer on Class I stream along north boundary. Maintain Level 1 structure by using Type F seed tree cut leaving cedar, spruce and all unmerchantable trees unless infected with mistletoe. Unit as laid out is not within 500' of lake. Mitigation measures for this unit are: F5, F8, F10, and W2. | | | |

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

VCU : 597.1

UNIT : 404

QUAD : C3-NE



- Revised Control Lake Project Boundary
- Post-Field Unit Boundary w/ Setting Codes
- Other Post-Field Unit Boundaries
- USFS Timber Types for Volc 4-7
- Eagle Tree Buffer of 330ft
- Existing & Rebuilt Roads
- F.S. Roads Under Construction
- Post-Field Proposed Roads
- Ahmu-Class 1 & Stream Chantypes
- Ahmu-Class 2 & Stream Chantypes
- Ahmu-Class 3 & Stream Chantypes
- Channel Type Change

- Lakes and Ponds
- Second Growth Units
- MMI 4
- McGilvery > 41
- Landings
- Stream & Lake NoCUT Buffers

June 09, 1994

.5 MILE

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

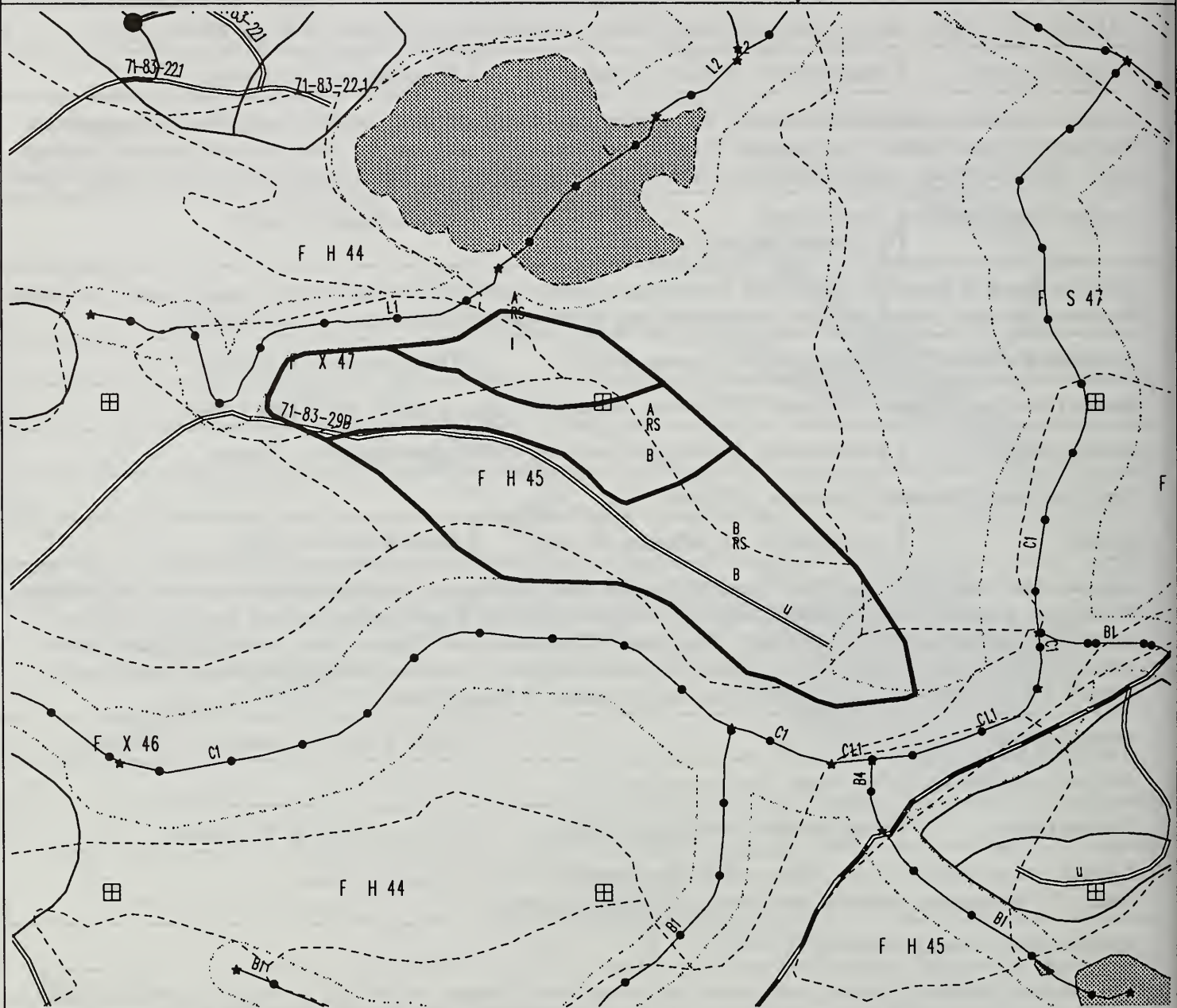
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| VCU #: 597 | UNIT #: 404 | QUARTER QUAD: C3NE | PHOTO YR/#: 1991/1090-26 |
| ACRES: 29 | VOL.: 940.9 MBF | LOGGING SYSTEM: 1/4 Swingyarder/Running Skyline and 3/4 Shovel Yarder | |
| LANDSCAPE ZONE: Unit is in proposed Honker block, Drumlin field, and adjacent to Scenic River Corridor. | | | |
| Timber/Vegetation | Field Review: B. Hedin, 8/16/93 | Office Review: J. Goering | |
| Species composition predominantly hemlock but includes some spruce and cedar. Predominantly hemlock regeneration. Regeneration sparse overall. Light amount of mistletoe infection evident in canopy. Some thin soil, poor soil drainage areas. Consider partial retention/shelterwood harvest to promote spruce and cedar composition and other resource values. | | | |
| Logging/Transportation | Field Review: S. Field/D. Keister, 8/21/93 | Office Review: J. Doyal | |
| Unit is accessed by Road #71-83-21.1 and a short spur. A strip on the SW side will require a swing yarder. Shovel log the rest of the unit. Partial cut is not recommended due to blowdown within the unit. Good economics. | | | |
| Watershed/Fisheries | Field Review: B. Romey, 8/02/93 | Office Review: T. Stewart | |
| Stream 1 and 3 are Class I - B/W 100' TTRA buffer. Stream 2 is Class I - B/W, 150' TTRA buffer. | | | |
| Soils/Geology | Field Review: M. Minnillo, 8/02/93 | Office Review: T. Stewart | |
| Low, flat slopes. No stability concerns. Dry site. | | | |
| Wildlife | Field Review: M. Minnillo, 8/02/93 | Office Review: M. Hall | |
| High use deer, bear, beaver, and hawk area. High wildlife use, riparian area and high quality deer winter range habitat. Recommend goshawk, marbled murrelet and eagle nest surveys as unit is good habitat for these species. Level 2 retention by leaving patch of trees in center of unit south of proposed road. Thorne River to north 1/4 mile. Beaver slough and pond along east boundary. Avoid disturbance of wintering trumpeter swans by avoiding all human activity within 0.5 mile of known swan wintering areas during October 15 through March 15. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit not seen from any priority travel route or use area. V1. | | | |
| Cultural/Lands | Field Review: D. Putnam, 7/23/93 | Office Review: T. W. Greiser | |
| Cultural - Unit partially or completely within high probability area for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Unit boundary modified to delete portion within recreational river corridor. Short Class I stream on northwest of unit requires 100' TTRA buffer and longer stream 150' TTRA buffer on northwest side. Lake on southeast boundary requires 100' no-cut and 400' type I selective cut buffer. Type G shelterwood to maintain structure. Mitigation measures for this unit are: F5, F8, W2, and W8. | | | |

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

VCU : 597.1

UNIT : 406

QUAD : C3-NE



- Revised Control Lake Project Boundary
- Post-Field Unit Boundary w/ Setting Codes
- Other Post-Field Unit Boundaries
- USFS Timber Types for Volc 4-7
- Eagle Tree Buffer of 330ft
- Existing & Rebuilt Roads
- F.S. Roads Under Construction
- Post-Field Proposed Roads
- Ahmu-Class 1 & Stream Chantypes
- Ahmu-Class 2 & Stream Chantypes
- Ahmu-Class 3 & Stream Chantypes
- Channel Type Change

- Lakes and Ponds
- Second Growth Units
- MMI 4
- McGilvery > 41
- Landings
- Stream & Lake NoCUT Buffers

March 20, 1995

.5 MILE

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

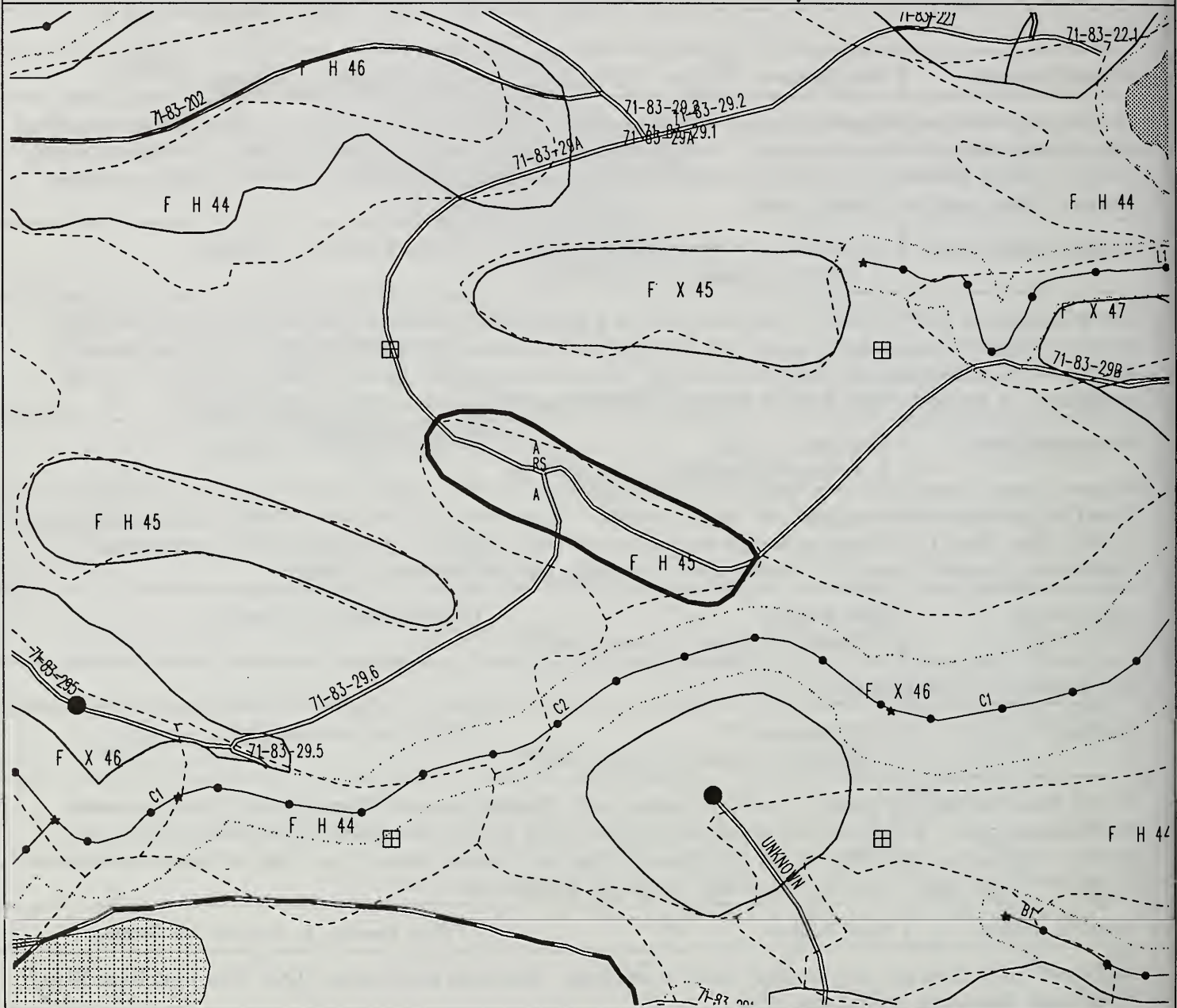
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| VCU #: 597 | UNIT #: 406 | QUARTER QUAD: C3NE | PHOTO YR/#: 1991/990-165 |
| ACRES: 43.9 | VOL.: 1481.7 MBF | LOGGING SYSTEM: Swingyard/Running Skyline | |
| LANDSCAPE ZONE: Unit is within Honker Block, Drumlin area, and 30 Road Corridor - also adjacent to Scenic River Corridor. | | | |
| Timber/Vegetation | Field Review: M. Case, 7/31/93 | Office Review: J. Goering | |
| Species composition predominantly hemlock with an occasional spruce. Regeneration only on nurse logs and consists of predominantly hemlock with a few spruce. Heavy amount of mistletoe infection evident in canopy. Windthrow damage present in middle portion of unit. Possible salmonberry and brush incursions with soil disturbance based on existing densities. Some poor soil drainage areas. | | | |
| Logging/Transportation | Field Review: J. Estabrook/ C. Giles/M. Hoshall, 6/13/93 | Office Review: C. Barnhart | |
| Unit is accessed by Rd #71-83-28.3. This road requires a 60' span bridge across a Class I stream with TTRA buffer; however bridge may be avoided by going west from unit and connecting with Rd #71-83-29.6. Partial suspension is possible with a running skyline, though not required. Partial cut is possible. Blowdown is not a problem. Unit is economical. A 100 foot stream buffer is flagged on the northern edge and the southeast edge of the unit. | | | |
| Watershed/Fisheries | Field Review: J. Knutzen/H. Sloan/C. Confer, 6/08/93 | Office Review: T. Stewart | |
| Class I or IIa along north boundary - 100' buffer required. Class I along south boundary - FP3 on west portion requiring a 100' buffer. Class I - FP4 on east portion requiring a 200' buffer (100' no commercial, 100' no programmed). Lake/muskeg complex to north will require 100' no-cut buffer plus 400' selective cut buffer. | | | |
| Soils/Geology | Field Review: J. Knutzen/H. Sloan/C. Confer, 6/08/93 | Office Review: T. Stewart | |
| Low gradient. No soils concerns. | | | |
| Wildlife | Field Review: J. Knutzen/H. Sloan/C. Confer, 6/08/93 | Office Review: M. Hall | |
| 30 acre sedge wetland with pond (>5 acres) to north of unit. Wetland runs into Thorne River. Light to moderate deer/bear sign noted. Two young bear skeletons identified. Duck (specification unknown) on pond. Retain Level 1 structure; contiguous old-growth. Avoid disturbance of wintering trumpeter swans by avoiding all human activity within 0.5 mile of known swan wintering areas during October 15 through March 15. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit is not visible from any priority travel routes or use areas. Maximum modification VQO. Seen from Road 30 in Foreground. Maximum Modification VQO. | | | |
| Cultural/Lands | Field Review: D. Putnam, 93 | Office Review: T.W. Greiser | |
| Cultural - Unit partially or completely within high probability area for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| 100' buffer required on stream along northwest boundary. 200' buffer required on stream along southern boundary. Lake to north of unit requires 100' no-cut buffer from edge of lake/muskeg/forest boundary plus 400' selective cut buffer. Structure will be maintained by 400' selective cut buffer (Type I group selection) on north side removing mistletoe trees, plus a Type B clearcut on rest of unit because of mistletoe. Mitigation measures for this unit are: F5, F8, and W4. | | | |

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

VCU : 597.1

UNIT : 407

QUAD : C3-NE



- Revised Control Lake Project Boundary
- Post-Field Unit Boundary w/ Setting Codes
- Other Post-Field Unit Boundaries
- USFS Timber Types for Volc 4-7
- Eagle Tree Buffer of 330ft
- Existing & Rebuilt Roads
- F.S. Roads Under Construction
- Post-Field Proposed Roads
- Ahmu-Class 1 & Stream Chantypes
- Ahmu-Class 2 & Stream Chantypes
- Ahmu-Class 3 & Stream Chantypes
- Channel Type Change

- Lakes and Ponds
- Second Growth Units
- MMI 4
- McGilvery > 41
- Landings
- Stream & Lake NoCUT Buffers

May 17, 1994

5 MILE



















CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

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|---|--|---|--------------------------|
| VCU #: 597 | UNIT #: 407 | QUARTER QUAD: C3-NE | PHOTO YR/#: 1991/1090-28 |
| ACRES: 10.6 | VOL.: 308.1 MBF | LOGGING SYSTEM: Swingyarder, Shovel | |
| LANDSCAPE ZONE: Unit is within USFS 30 Road Corridor, Drumlin Area, and the proposed Honker Block. | | | |
| Timber/Vegetation | Field Review: J. Miller, 8/9/93 | Office Review: J. Goering | |
| Species composition includes hemlock, and cedar. Predominantly hemlock regeneration. Fairly dense understory vegetation. | | | |
| Logging/Transportation | Field Review: K. Martin/B. Flatz, 8/15/93 | Office Review: E. Urstadt | |
| Unit is accessed by Road #71-83-29.A and Road #71-83-29.6B. Recommend swing yarding entire unit but shovel yarding is possible NE of the road. A 100 foot buffer is on the SE corner of unit. Tailholds are poor, a mobile tailspar would work. Partial cut is feasible. Fair economics. | | | |
| Watershed/Fisheries | Field Review: B. Romey, 8/04/93 | Office Review: T. Stewart | |
| Class I - 100' buffer on stream near south boundary. No streams in unit. | | | |
| Soils/Geology | Field Review: M. Minnillo, 8/04/93 | Office Review: T. Stewart | |
| Low slopes, generally a dry site; no stability concerns. | | | |
| Wildlife | Field Review: M. Minnillo, 8/04/93 | Office Review: M. Hall | |
| Snag retention Level 1. Snags will also be left in east end of unit due to stream buffer. Maintain north and south unit boundaries away from muskegs. Avoid disturbance of wintering trumpeter swans by avoiding all human activity within 0.5 mile of known swan wintering areas during October 15 through March 15. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit not seen from any priority travel route or use area. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| South unit boundary adjusted northward to exclude forest muskeg. 100' Class I no-cut buffer should screen visibility of unit from USFS 30 Road. Type A clearcut. Mitigation measures for this unit are: F4, F5, F8, F10, and W5. | | | |

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

QUAD : C3-NE



- | | | | |
|---|---|---|-----------------------------|
|  | Revised Control Lake Project Boundary |  | Lakes and Ponds |
|  | Post-Field Unit Boundary w/ Setting Codes |  | Second Growth Units |
|  | Other Post-Field Unit Boundaries |  | MMI 4 |
|  | USFS Timber Types for Volc 4-7 |  | McGilvery > 41 |
|  | Eagle Tree Buffer of 330ft |  | Landings |
|  | Existing & Rebuilt Roads |  | Stream & Lake NoCUT Buffers |
|  | F.S. Roads Under Construction | | |
|  | Post-Field Proposed Roads | | |
|  | Ahmu-Class 1 & Stream Chantypes | | |
|  | Ahmu-Class 2 & Stream Chantypes | | |
|  | Ahmu-Class 3 & Stream Chantypes | | |
|  | Channel Type Change | | |

.5 MILE

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

| | | | |
|--|--|--|--------------------------|
| VCU #: 597 | UNIT #: 409 | QUARTER QUAD: C3NE | PHOTO YR/#: 1991/1090-26 |
| ACRES: 11.8 | VOL.: 480.9 MBF | LOGGING SYSTEM: Swingyarder, Running Skyline | |
| LANDSCAPE ZONE: In proposed Honker Block, Drumlin Area, and along 30 Road Corridor. | | | |
| Timber/Vegetation | Field Review: B. Hedin, 6/15/93 | Office Review: J. Goering | |
| Species composition predominantly hemlock but includes some spruce and cedar. Regeneration predominantly hemlock with a few spruce but is lacking cedar. Moderate amount of mistletoe infection evident in canopy. Windthrow damage present in northern portion of unit. Harvest all mistletoe infected hemlock and cut infected regeneration. | | | |
| Logging/Transportation | Field Review: B. Webster/ B. Wilkinson/K. Martin, 8/15/93 | Office Review: K. Jehnke | |
| Unit is accessed by Road #71-83-29.1. Recommend swing yarding entire unit although shovel logging is practical NE of the road. A 100 foot stream buffer is on the Rio Beaver (south unit boundary). Large defective snags could be left for wildlife. Partial cut is feasible. Fair economics. | | | |
| Watershed/Fisheries | Field Review: J. Knutzen, 6/11/93 | Office Review: T. Stewart | |
| 200' buffer along stream on south side of unit. No other streams present. Buffer 100' from any side channels as is excellent quality stream. | | | |
| Soils/Geology | Field Review: R. Rogers, 6/11/93 | Office Review: T. Stewart | |
| Low gradient. No concerns. | | | |
| Wildlife | Field Review: J. Knutzen, 6/11/93 | Office Review: M. Hall | |
| No special concerns. Woodpecker cavities identified within unit. Retain Level 1 structure. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit not seen from any priority travel route or use area. V1. Visible from 30 Road. Seen from Road 30 in Foreground. Maximum Modification VQO. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Type F seed tree harvest leaving spruce and cedar, and selecting for mistletoed hemlock to be cut. Cut mistletoed regeneration as well. 200' no-cut buffers along south side of unit with additional snag clumps included. Mitigation measures for this unit are: F5, F8, F10, and W2. | | | |

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

VCU : 597.1

UNIT : 410

QUAD : C3-NE



- Revised Control Lake Project Boundary
- Post-Field Unit Boundary w/ Setting Codes
- Other Post-Field Unit Boundaries
- USFS Timber Types for Volc 4-7
- Eagle Tree Buffer of 330ft
- Existing & Rebuilt Roads
- F.S. Roads Under Construction
- Post-Field Proposed Roads
- Ahmu-Class 1 & Stream Chantypes
- Ahmu-Class 2 & Stream Chantypes
- Ahmu-Class 3 & Stream Chantypes
- Channel Type Change

- Lakes and Ponds
- Second Growth Units
- MMI 4
- McGilvery > 41

- Landings
- Stream & Lake NoCUT Buffers

.5 MILE

May 17, 1994

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

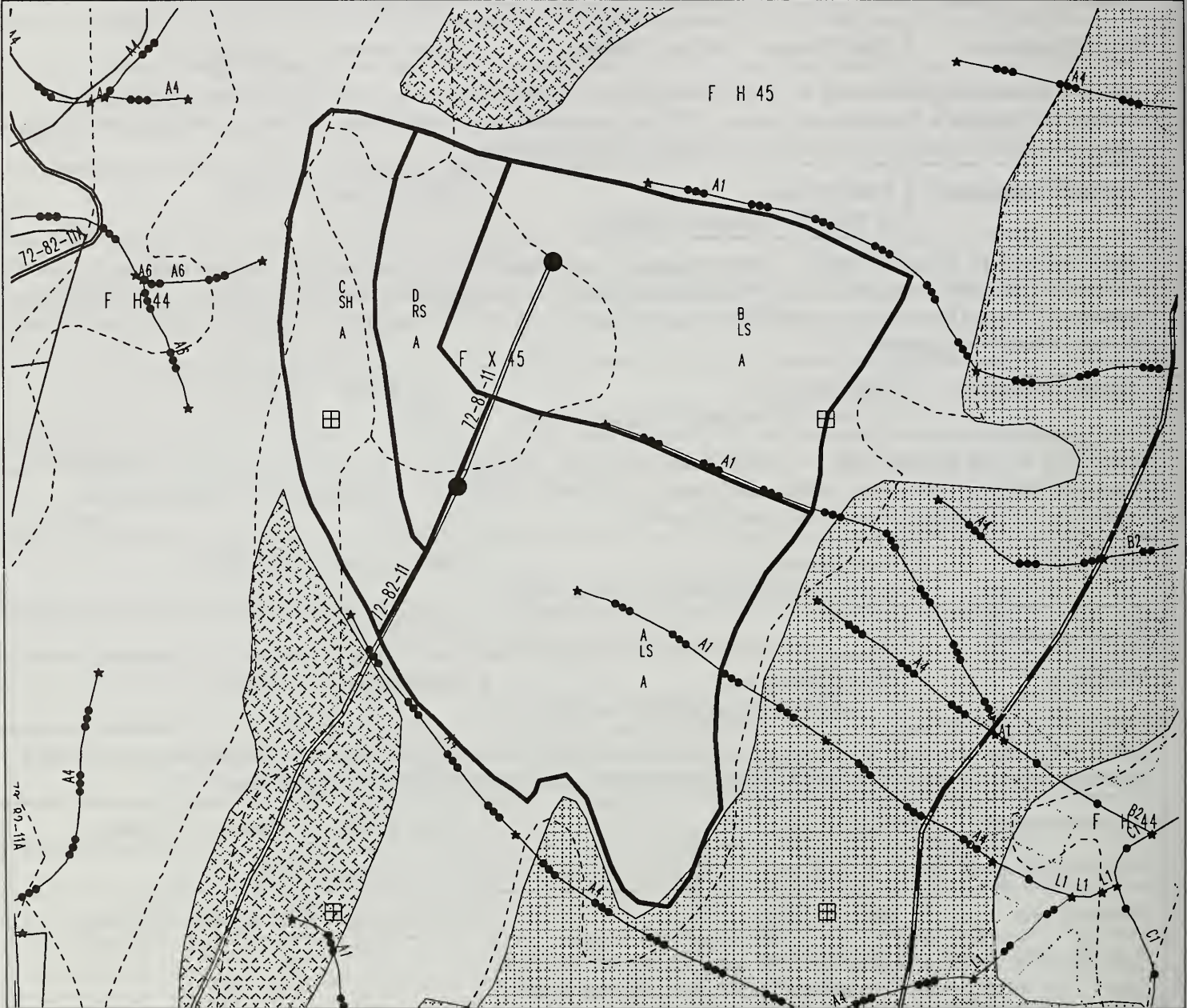
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|--|--|---|--------------------------|
| VCU #: 597 | UNIT #: 410 | QUARTER QUAD: C3NE | PHOTO YR/#: 1991/990-165 |
| ACRES: 28.8 | VOL.: 565.9 MBF | LOGGING SYSTEM: Shovel | |
| LANDSCAPE ZONE: Unit is within USFS 30 Road Corridor, Drumlin Area, and proposed Honker Block. | | | |
| Timber/Vegetation | Field Review: J. Miller, 6/16/93 | Office Review: J. Goering | |
| Species composition predominantly hemlock with some cedar. Few spruce are present. Regeneration predominantly hemlock but includes a few cedar and spruce. Little to no mistletoe evident in canopy. Numerous muskegs are located around the unit. Promote spruce/cedar regeneration through planting. | | | |
| Logging/Transportation | Field Review: B. Flatz/B. Wilkinson, 8/30/93 | Office Review: K. Jehnke | |
| Unit is accessed by Road #71-83-28.1. Shovel logging is recommended for the entire unit. Taglines connected to shovel can harvest one small, steep pitch. A 100 foot stream buffer is on the south and east sides. Partial cut is possible. Fair economics. The IDT noticed the possibility of another setting to the NW. This road and setting are not flagged and have not been visited by engineers. | | | |
| Watershed/Fisheries | Field Review: C. Confer/D. Smayda/H. Sloan, 6/08/93 | Office Review: T. Stewart | |
| Stream 1 is a Class I stream with 100' buffer (south boundary). Stream 2 is a Class I stream with 100' TTRA buffer and requires a 100' selective harvest buffer (east boundary). Stream 3 is a Class I stream with 100' TTRA buffer and requires a 100' selective harvest buffer (west boundary). | | | |
| Soils/Geology | Field Review: C. Confer/K. Smayda/H. Sloan, 6/08/93 | Office Review: T. Stewart | |
| No soils concerns. | | | |
| Wildlife | Field Review: C. Confer/K. Smayda/H. Sloan, 6/08/93 | Office Review: M. Hall | |
| Level 1 structure retention. Beaver dam southeast of unit. Avoid disturbance of wintering trumpeter swans by avoiding all human activity within 0.5 mile of known swan wintering areas during October 15 through March 15. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit visible from 30 Road. Seen from Road 30 in Foreground. Maximum Modification VQO. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Stream 1 is a Class I stream with 100' buffer (south boundary). Stream 2 is a Class I stream with 100' TTRA buffer and requires a 100' selective harvest buffer (east boundary). Stream 3 is a Class I stream with 100' TTRA buffer and requires a 100' selective harvest buffer (west Boundary). Class I stream with 100' no-cut and 100' selective harvest buffer should help screen visibility of unit from 30 Road. Type B clearcut in both settings. Opportunity for an additional setting identified (available for this entry) to the northwest of this unit which would not require an additional Class I stream crossing. This area will need to be field verified and added prior to layout. Restrict shovel logging to predesignated skidroads using adequate slash mat to protect soils. Mitigation measures for this unit are: F5, F8, F10, and W4. | | | |

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

VCU : 597.2

UNIT : 414

QUAD : C3-NE



- Revised Control Lake Project Boundary
- Post-Field Unit Boundary w/ Setting Codes
- Other Post-Field Unit Boundaries
- USFS Timber Types for Volc 4-7
- Eagle Tree Buffer of 330ft
- Existing & Rebuilt Roads
- F.S. Roads Under Construction
- Post-Field Proposed Roads
- Ahmu-Class 1 & Stream Chantypes
- Ahmu-Class 2 & Stream Chantypes
- Ahmu-Class 3 & Stream Chantypes
- Channel Type Change

- Lakes and Ponds
- Second Growth Units
- MMI 4
- McGilvery > 41
- Landings
- Stream & Lake NoCUT Buffers

.5 MILE

May 17, 1994

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

| | | | |
|--|---|---|---------------------------|
| VCU #: 597 | UNIT #: 414 | QUARTER QUAD: C3NE | PHOTO YR/#: 1991/1090-128 |
| ACRES: 111.9 | VOL.: 4749.8 MBF | LOGGING SYSTEM: 100' Tower/Live Skyline/Shotgun, Shovel | |
| LANDSCAPE ZONE: Located in Honker Watershed (Rio Beaver), but not in proposed Honker Block. | | | |
| Timber/Vegetation | Field Review: T. Stecher/S. Karstens, 7/2/93 | Office Review: J. Goering | |
| Species composition predominantly hemlock with some spruce. Few cedar are present. Regeneration predominantly hemlock with a few spruce but is lacking cedar. Steep slopes and some thin soils. Deeply channeled streams/V-notches. | | | |
| Logging/Transportation | Field Review: J. Estabrook/C. Giles/D. Keister, 7/02/93 | Office Review: E. Urstadt, 9/13/93 | |
| Unit is accessed by Roads 72-82-11 and 72-82.11.1. The southeast 3/4 of the unit can be logged using a 100' tower with <u>shotgun system</u> ; however skyline tags and a mobile tailhold are needed. The western upper portions of the unit can be shovel and swing yarded to the upper road. There are blind leads in this western portion. The unit is good economically. | | | |
| Watershed/Fisheries | Field Review: C. Confer, 6/23/93 | Office Review: T. Stewart | |
| Four Class III streams. Stream 1: G/W flagging - directional fall. Stream 2: O/W flagging - directional fall/split yard. Stream 3: O/W flagging - directional fall/split yard. Stream 4: O/W flagging - directional fall. | | | |
| Soils/Geology | Field Review: C. Confer, 6/23/93 | Office Review: T. Stewart | |
| Partial suspension over entire unit. MMI4 soils originally mapped in upper portion of unit were not found in the field. | | | |
| Wildlife | Field Review: G. Green/C. Confer, 6/23/93 | Office Review: M. Hall | |
| No concerns except goose scats in muskegs on northwest edge. Hairy woodpecker observed. Level 3 structure retention due to large clear-cut along east boundary and because this unit would fragment small remnant block. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit not seen from any priority travel route or use area. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Partial suspension required and achieved. Split yard Class III streams. Because of windthrow potential in this exposed valley, recommend Type A clearcut. Area above road will be included since this narrow strip of timber along a ridgetop has a very high probability of blowdown after harvest below. Remaining unit boundary locations are necessary for logical settings and the prevention of isolating timber. Mitigation measures for this unit are: F3, F6, F8, and W5. | | | |

NO UNIT MAP

UNIT DROPPED OR DEFERRED

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

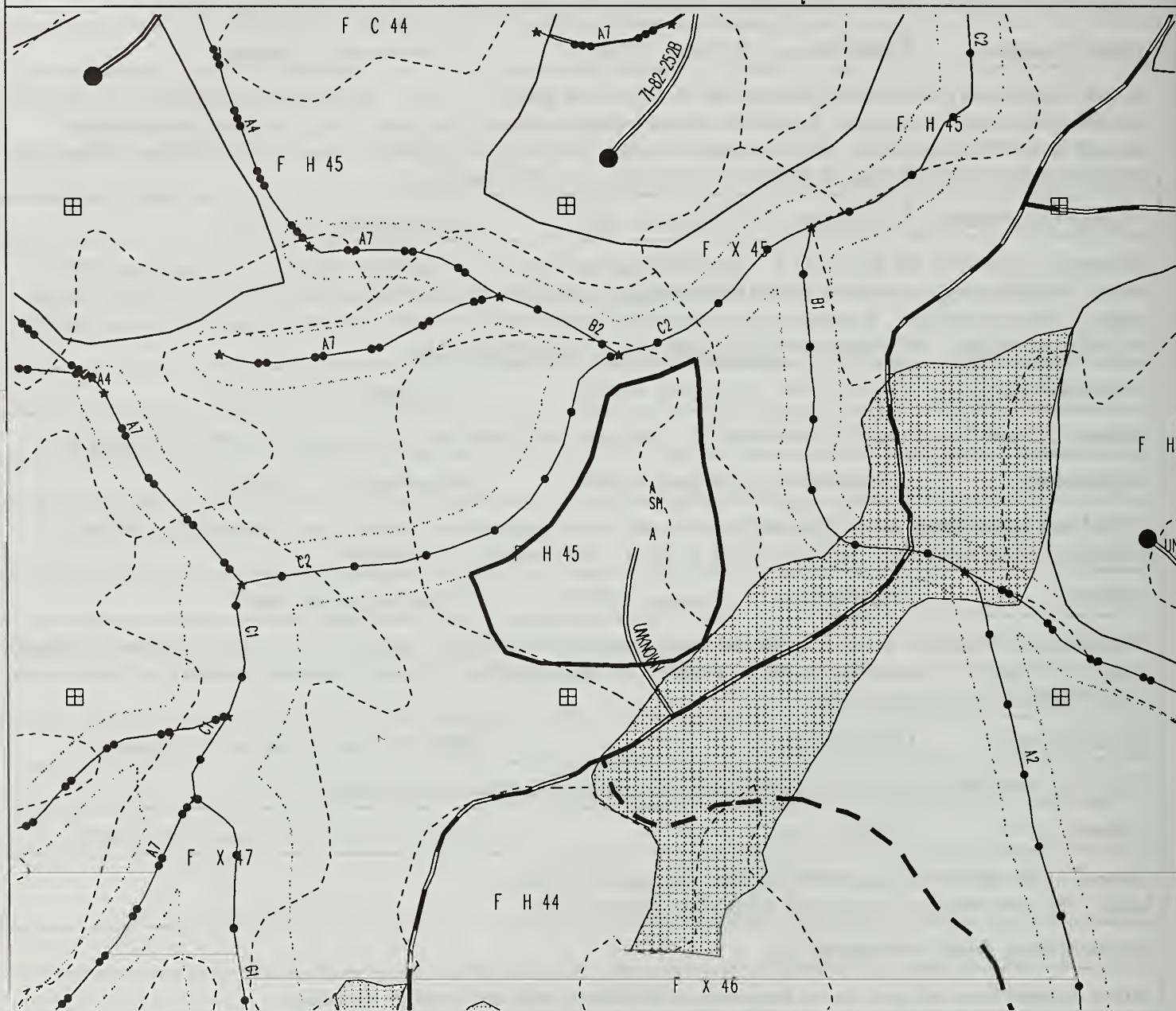
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|--|-----------------------------------|---|---------------------------|
| VCU #: 597 | UNIT #: 415 | QUARTER QUAD: C3NE | PHOTO YR/#: 1991/1090-128 |
| ACRES: | VOL.: | LOGGING SYSTEM: | |
| LANDSCAPE ZONE: Unit is within Honker Watershed (Rio Beaver) but not in proposed Honker Block. | | | |
| Timber/Vegetation | Field Review: B. Hedin, 7/7/93 | Office Review: J. Goering | |
| Species composition predominantly hemlock but includes some spruce and cedar. Regeneration predominantly hemlock but includes sparse cedar and spruce. Rock bluffs on the higher elevations of the unit. Rocky, relatively thin soils and exposed rock. Slope instability / failure potential existing. Very large slide adjacent to unit and small failures within unit. Steep slope, many small drainage's through unit. Salmonberry present throughout. | | | |
| Logging/Transportation | Field Review: H. Wilcox/C. Giles | Office Review: E. Urstadt | |
| This unit is accessed by Rd #72-82-11.1. Three landings have been chosen and have adequate guystumps for a 100' tower. Partial suspension will be achieved with a shotgun system to mobile tailhold across valley. Skyline tags will be needed. Do not partial cut. Blowdown is not a problem. The economics are fair. Resource report says to drop unit if not helicopter logged. Full suspension with a cable system is not practical here. | | | |
| Watershed/Fisheries | Field Review: R. Rogers, 6/25/93 | Office Review: T. Stewart | |
| Streams 1, 2, and 3 are Class III - directional fall, split yard, and include 70' non-merchantable buffer on Stream 2. | | | |
| Soils/Geology | Field Review: R. Rogers, 6/25/93 | Office Review: T. Stewart | |
| 41% of unit is McGilvery soils. Consider dropping unit due to regeneration concerns due to thin soils on cliffs and presence of active landslides. Slopes are 75% to 120%. Helicopter log if not dropped. | | | |
| Wildlife | Field Review: S. Tanguay, 6/25/93 | Office Review: M. Hall | |
| Potential goshawk habitat, red-tailed hawk and sharp-shinned hawk observed. Should be surveyed for goshawk. Muskeg along west boundary. Recommend Level 3 structure retention due to large clear-cut along east boundary and because unit would fragment small remnant block. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit is not visible from any priority travel routes or use areas. Maximum modification VQO. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Unit is dropped from unit pool due to dominance of McGilvery soils and localized landslides. | | | |

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

VCU : 597.2

UNIT : 416

QUAD : C3-NE



- Revised Control Lake Project Boundary
- Post-Field Unit Boundary w/ Setting Codes
- Other Post-Field Unit Boundaries
- USFS Timber Types for Volc 4-7
- Eagle Tree Buffer of 330ft
- Existing & Rebuilt Roads
- F.S. Roads Under Construction
- Post-Field Proposed Roads
- Ahmu-Class 1 & Stream Chantypes
- Ahmu-Class 2 & Stream Chantypes
- Ahmu-Class 3 & Stream Chantypes
- Channel Type Change

- Lakes and Ponds
- Second Growth Units
- MMI 4
- McGilvery > 41
- Landings
- Stream & Lake NoCUT Buffers

May 17, 1994

0.5 MILE

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

| | | | |
|---|---|---|---------------------------|
| VCU #: 597 | UNIT #: 416 | QUARTER QUAD: C3NE | PHOTO YR/#: 1991/1090-126 |
| ACRES: 17.8 | VOL.: 360.9 MBF | LOGGING SYSTEM: Shovel | |
| LANDSCAPE ZONE: Unit is located in Honker Watershed (Rio Beaver) but not in proposed Honker Block. | | | |
| Timber/Vegetation | Field Review: B. Hedin/T. Stecher, 7/7/93 | Office Review: J. Goering | |
| Species composition includes hemlock and cedar. Predominantly hemlock regeneration. Low to moderate amounts of mistletoe infection evident in canopy. Extensive stem decay evident in the large cedar. Some thin soil, poor soil drainage areas. Low volume, mixed-species, multi-canopy stand with < 50% canopy closure. | | | |
| Logging/Transportation | Field Review: R. Stuntzner/M. Hoshall, 6/05/93 | Office Review: M. Whitty | |
| Requires 625' of easy construction by Rd #71-83-31.4. Recommend shovel logging. AYD is approximately 250'. Stand is old and defective. Partial cut is not recommended. Approximately 800' of 100' buffer to northwest of unit. | | | |
| Watershed/Fisheries | Field Review: B. Romey/M. Minnillo, 6/08/93 | Office Review: T. Stewart | |
| 100' TTRA buffer required on Class I, Stream 1. | | | |
| Soils/Geology | Field Review: M. Minnillo, 6/08/93 | Office Review: T. Stewart | |
| Low gradient. No concerns. | | | |
| Wildlife | Field Review: M. Minnillo, 6/08/93 | Office Review: M. Hall | |
| Observed and heard sapsucker in unit. High use wildlife travel corridor along creek. Recommend Level 1 structure retention in unit. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit is not visible from any priority travel routes or use areas. Maximum modification VQO. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| 100' TTRA buffer on stream along northwest side of unit. Recommend Type A clearcut because of thin soils, mistletoe, and decay. Mitigation measures for this unit are: F5, F8, and W5. | | | |

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

VCU : 597.2

UNIT : 417

QUAD : C3-NE



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|--|---|--|-----------------------------|
| | Revised Control Lake Project Boundary | | Lakes and Ponds |
| | Post-Field Unit Boundary w/ Setting Codes | | Second Growth Units |
| | Other Post-Field Unit Boundaries | | MMI 4 |
| | USFS Timber Types for Volc 4-7 | | McGilvery > 41 |
| | Eagle Tree Buffer of 330ft | | Landings |
| | Existing & Rebuilt Roads | | Stream & Lake NoCUT Buffers |
| | F.S. Roads Under Construction | | |
| | Post-Field Proposed Roads | | |
| | Ahmu-Class 1 & Stream Chantypes | | |
| | Ahmu-Class 2 & Stream Chantypes | | |
| | Ahmu-Class 3 & Stream Chantypes | | |
| | Channel Type Change | | |

.5 MILE

May 17, 1994

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

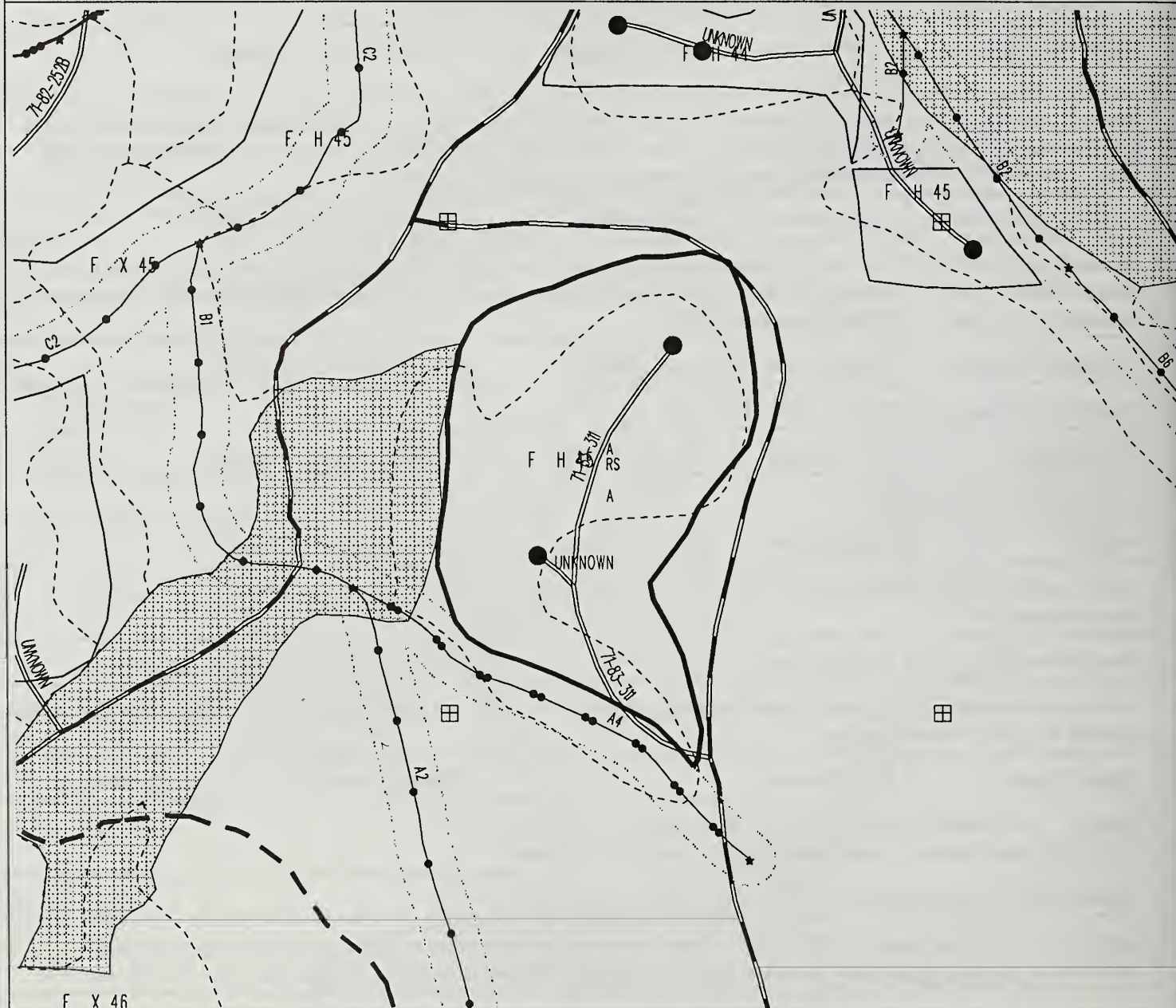
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|---|--|---|--------------------------|
| VCU #: 597 | UNIT #: 417 | QUARTER QUAD: C3NE | PHOTO YR/#: 1991/1090-27 |
| ACRES: 9.9 | VOL.: 260.9 MBF | LOGGING SYSTEM: Running Skyline/Swingyard, Shovel | |
| LANDSCAPE ZONE: Unit is located in Drumlin area and 30 Road Corridor. | | | |
| Timber/Vegetation | Field Review: G. Hedin/B. Hasebe, 8/12/93 | Office Review: J. Goering | |
| Species composition predominantly hemlock and cedar with a few spruce present. Predominantly hemlock regeneration. Light amount of mistletoe infection evident in canopy. Low volume, mixed-species, multi-canopy stand with < 50% canopy closure in the eastern portion. Poor regeneration in the eastern portion. | | | |
| Logging/Transportation | Field Review: P. Scott, 9/4/93 | Office Review: E. Urstadt | |
| Accessed by Rd #71-83-30.9. 940' of easy construction with short pitches of 15% favorable and 12% adverse conditions. Approximately 1,200' of existing road will require reconstruction. Swingyard to north landing all uphill. Shovel log the remainder to the road. MYD is approximately 350'. | | | |
| Watershed/Fisheries | Field Review: B. Romey, 8/01/93 | Office Review: T. Stewart | |
| Stream 1 is a Class I - B/W, 100' TTRA buffer. | | | |
| Soils/Geology | Field Review: B. Romey, 8/01/93 | Office Review: T. Stewart | |
| Low slopes, no soil concerns. | | | |
| Wildlife | Field Review: B. Romey, 8/01/93 | Office Review: M. Hall | |
| Retain structure around perimeter and avoid high use muskegs on northwest corner of unit. Recommend Level 1 structure retention. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit is not visible from any priority travel routes or use areas. Maximum Modification VQO. Visible from 30 Road but screened by trees in stream buffer. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Stream to north of unit requires 100' buffer. Type B clearcut recommended to ensure successful regeneration. Transition to muskeg on east also provides snags and habitat. Mitigation measures for this unit are: F5, F8, and W4. | | | |

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

VCU : 597.2

UNIT : 418

QUAD : C3-NE



May 17, 1994

.5 MILE

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

| | | | |
|---|--|---|--------------------------|
| VCU #: 597 | UNIT #: 418 | QUARTER QUAD: C3NE | PHOTO YR/#: 1991/1090-28 |
| ACRES: 40.8 | VOL.: 624.5 MBF | LOGGING SYSTEM: Swingyard/Running Skyline | |
| LANDSCAPE ZONE: Unit is in Honker Watershed (Rio Beaver) but not in proposed Honker Block. | | | |
| Timber/Vegetation | Field Review: T. Stecher, 7/29/93 | Office Review: J. Goering | |
| Species composition predominantly hemlock with some cedar. Few spruce are present. Regeneration predominantly hemlock and includes a few cedar but is generally lacking spruce. Alaska yellow cedar decline evident. Fairly dense understory vegetation in the southern portion. Fairly dense salal present in the southwest. Low volume, mixed-species, multi-canopy stand with < 50% canopy closure in the southwest portion. Consider partial retention/seedtree harvest to promote regenerative success in the southwest portion. | | | |
| Logging/Transportation | Field Review: J. Doyal/J. Estabrook/S. Field, 6/10/93 | Office Review: M. Whitty | |
| Swing yarding (70%) uphill is the recommended harvest system. The unit is accessed by Rd #71-83-30.9 and Rd #71-83-30.9A which are easy construction. There may be blowdown problems in southeast corner; possibly leave some unmerchantable trees. Economics are poor. | | | |
| Watershed/Fisheries | Field Review: B. Romey/ M. Minnillo, 6/08/93 | Office Review: T. Stewart | |
| Stream at south side of unit is Class II - buffer with 100' no-cut. | | | |
| Soils/Geology | Field Review: M. Minnillo, 6/08/93 | Office Review: T. Stewart | |
| Slopes are less than 10%. No concerns. | | | |
| Wildlife | Field Review: M. Minnillo, 6/08/93 | Office Review: M. Hall | |
| No concerns. Recommend Level 1 structure retention. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit is not visible from any priority travel routes or use areas. Maximum modification VQO. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Leave all unmerchantable trees at southwest corner to promote regeneration. Type A clearcut recommended. Boundary modified to buffer Class II stream south of unit. Mitigation measures for this unit are: F6, F8, and W5. | | | |

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

VCU : 597.2

UNIT : 419

QUAD : C3-NE



- Revised Control Lake Project Boundary
- Post-Field Unit Boundary w/ Setting Codes
- Other Post-Field Unit Boundaries
- USFS Timber Types for Volc 4-7
- Eagle Tree Buffer of 330ft
- Existing & Rebuilt Roads
- F.S. Roads Under Construction
- Post-Field Proposed Roads
- Ahmu-Class 1 & Stream Chantypes
- Ahmu-Class 2 & Stream Chantypes
- Ahmu-Class 3 & Stream Chantypes
- Channel Type Change

- Lakes and Ponds
- Second Growth Units
- MMI 4
- McGilvery > 41
- Landings
- Stream & Lake NoCUT Buffers

.5 MILE

May 17, 1994

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

| | | | |
|---|---|---|--------------------------|
| VCU #: 597 | UNIT #: 419 | QUARTER QUAD: C3NE | PHOTO YR/#: 1991/1090-27 |
| ACRES: 17.4 | VOL.: 349.9 MBF | LOGGING SYSTEM: Swingyarder/Running Skyline | |
| LANDSCAPE ZONE: Unit is within Honker Watershed (Rio Beaver) but not in proposed Honker Block. | | | |
| Timber/Vegetation | Field Review: J. Miller, 6/12/93 | Office Review: J. Goering | |
| Species composition includes hemlock, spruce, and cedar. Predominantly hemlock regeneration. Moderate amount of stem decay evident in cedar. Fairly dense understory vegetation. | | | |
| Logging/Transportation | Field Review: K. Jehnke/E. Urstadt, 6/07/93 | Office Review: K. Jehnke | |
| Unit is accessed by Road #71-93-30.9 and one spur. This unit should be swing yarded using a running skyline. One hundred foot stream buffers split unit into two settings. Road enters buffer but does not cross stream. Fair economics. Partial cut is feasible. | | | |
| Watershed/Fisheries | Field Review: B. Romey/ M. Minnillo, 6/08/93 | Office Review: T. Stewart | |
| 100' TTRA buffer required on Class I, Stream 1. 100' TTRA buffer required on Class I, Stream 2. | | | |
| Soils/Geology | Field Review: M. Minnillo, 6/08/93 | Office Review: T. Stewart | |
| Slopes are generally less than 20%. No concerns. | | | |
| Wildlife | Field Review: M. Minnillo, 6/08/93 | Office Review: M. Hall | |
| No concerns. Recommend Level 1 structure retention in unit. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit is not visible from any priority travel routes or use areas. Maximum Modification VQO. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| 100' TTRA buffer required on both Class I streams - northeast side of unit and within unit. Recommend Type A clearcut. Mitigation measures for this unit are: F5, F8, F10, and W5. | | | |

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

VCU : 597.2

UNIT : 420

QUAD : C3-NE



- | | | | |
|--|---|--|-----------------------------|
| | Revised Control Lake Project Boundary | | Lakes and Ponds |
| | Post-Field Unit Boundary w/ Setting Codes | | Second Growth Units |
| | Other Post-Field Unit Boundaries | | MMI 4 |
| | USFS Timber Types for Volc 4-7 | | McGilvery > 41 |
| | Eagle Tree Buffer of 330ft | | Landings |
| | Existing & Rebuilt Roads | | Stream & Lake NaCUT Buffers |
| | F.S. Roads Under Construction | | |
| | Post-Field Proposed Roads | | |
| | Ahmu-Class 1 & Stream Chantypes | | |
| | Ahmu-Class 2 & Stream Chantypes | | |
| | Ahmu-Class 3 & Stream Chantypes | | |
| | Channel Type Change | | |

.5 MILE

May 17, 1994

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

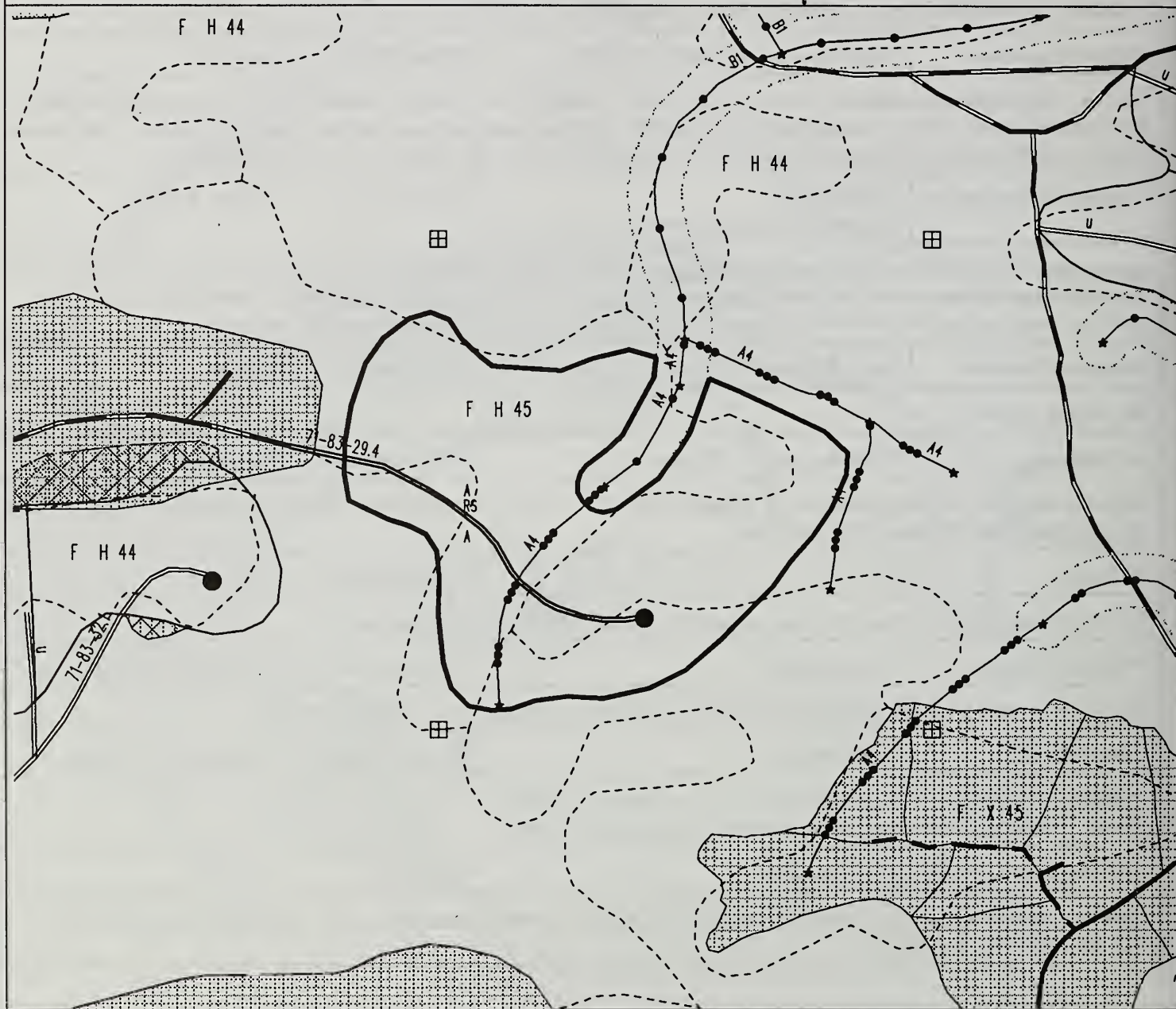
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|--|---|--|--------------------------|
| VCU #: 597 | UNIT #: 420 | QUARTER QUAD: C3NE | PHOTO YR/#: 1991/1090-27 |
| ACRES: 20 | VOL.: 410.1 MBF | LOGGING SYSTEM: Shovel/Swingyarder/Running Skyline | |
| LANDSCAPE ZONE: Unit is in the Rio Beaver watershed. | | | |
| Timber/Vegetation | Field Review: G. Hedin, 6/24/93 | Office Review: J. Goering | |
| Species composition predominantly cedar with hemlock. Little spruce is present. Regeneration predominantly hemlock but includes a few cedar. Dense understory vegetation. Muskeg incursions incorporated with mixed species, low volume timber in some areas. Minimize soil compaction/displacement and avoid yarding over bog/muskeg areas. | | | |
| Logging/Transportation | Field Review: J. Spolar/D. Goude 6/24/93 | Office Review: E. Urstadt, 9/23/93 | |
| Recommend combination of cable and shovel logging. Cable system analyzed was running skyline with 50' tower. Need additional spur to west side of unit to facilitate shovel logging. Partial suspension achievable. Blowdown is not a problem. Accessed by Rd #71-83-32.1 which is 1,842' long. Propose approximately 800' of additional spur. | | | |
| Watershed/Fisheries | Field Review: R. Rogers, 6/22/93 | Office Review: T. Stewart | |
| No streams in unit. | | | |
| Soils/Geology | Field Review: R. Rogers, 6/22/93 | Office Review: T. Stewart | |
| Partial suspension over entire unit due to presence of McGilvery soils and glacial till. Minimize cuts due to road building on unstable glacial till below 600' elevation. | | | |
| Wildlife | Field Review: G. Green, 6/22/93 | Office Review: R. Fairbanks | |
| No major concerns other than split yard and directional fall from muskegs within unit. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit is not visible from any priority travel routes or use areas. Maximum Modification VQO. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Type B clearcut because of previous harvest in area. Achieve partial suspension in unit. Mitigation measures for this unit are: F3, F8, and W4. | | | |

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

VCU : 597.2

UNIT : 421

QUAD : C3-NE



- Revised Control Lake Project Boundary
- Post-Field Unit Boundary w/ Setting Codes
- Other Post-Field Unit Boundaries
- USFS Timber Types for Volc 4-7
- Eagle Tree Buffer of 330ft
- Existing & Rebuilt Roads
- F.S. Roads Under Construction
- Post-Field Proposed Roads
- Ahmu-Class 1 & Stream Chantypes
- Ahmu-Class 2 & Stream Chantypes
- Ahmu-Class 3 & Stream Chantypes
- Channel Type Change

- Lakes and Ponds
- Second Growth Units
- MMI 4
- McGilvery > 41
- Landings
- Stream & Lake NoCUT Buffers

March 20, 1995

0.5 MILE

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

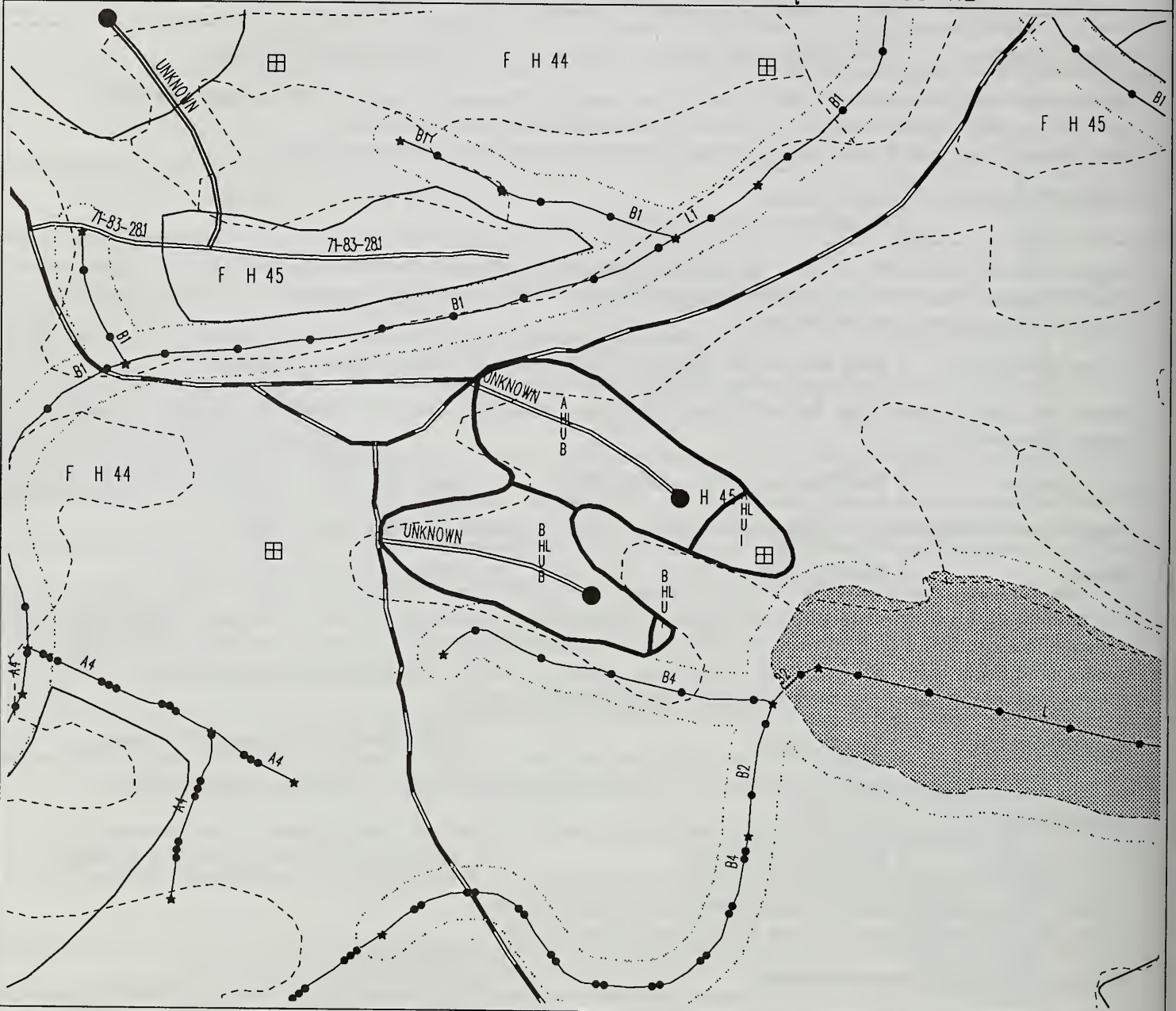
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|--|--|---|--------------------------|
| VCU #: 597 | UNIT #: 421 | QUARTER QUAD: C3NE | PHOTO YR/#: 1991/1090-27 |
| ACRES: 46.1 | VOL.: 1096.4 MBF | LOGGING SYSTEM: Swingyarder/Running Skyline | |
| LANDSCAPE ZONE: Unit is located in Rio Beaver Watershed. | | | |
| Timber/Vegetation | Field Review: S. Karstens, 7/3/93 | Office Review: J. Goering | |
| Species composition predominantly hemlock with some cedar. Few spruce are present. Predominantly hemlock regeneration. Fairly dense understory vegetation. Some salmonberry and salal present. Some thin soil, poor soil drainage areas. Promote spruce/cedar regeneration through planting. | | | |
| Logging/Transportation | Field Review: B. Webster/T. Wetzel, 6/21/93 | Office Review: K. Jehnke | |
| Unit is accessed by Road #71-83-29.4. Recommend highlead with 70 foot tower or a large swing yarder. Eighty percent is uphill logging. Run additional profiles during final layout to check feasibility of partial cut. A 100 foot buffer is within the center-north portion of the unit. | | | |
| Watershed/Fisheries | Field Review: R. Rogers, 6/22/93 | Office Review: T. Stewart | |
| Stream 1 is Class II - needs 100' buffer, flagged blue/white. Stream 2 is Class III - directional fall and split yard, flagged orange/white. | | | |
| Soils/Geology | Field Review: R. Rogers, 6/22/93 | Office Review: T. Stewart | |
| Minimize road cutting and cut back angles to minimize sliding on glacial tills. No other concerns. | | | |
| Wildlife | Field Review: G. Green, 6/22/93 | Office Review: M. Hall | |
| 100' buffer between unit and 1966 clearcut to maintain a high use travel corridor for deer and bears. The 1966 clearcut is virtually impenetrable. A 100' clear strip will allow north/south movement. Otherwise, you create a mile-long "barrier". Wildlife buffer recommended on the western edge to clearcut to maintain high bear and deer use. Level 1 structure retention. Goshawk survey conducted - no detections. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit not seen from any priority travel route or use area. Maximum Modification VQO. Seen from Road 30 in middleground. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| TTRA 100' buffer along Class I stream for about 600' into unit. Remainder of stream is a Class III which should be split yarded. Type A clearcut. Mitigation measures for this unit are as follows: F5, F6, F8, and W5. | | | |

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

VCU : 597.2

UNIT : 422

QUAD : C3-NE



- Revised Control Lake Project Boundary
- Post-Field Unit Boundary w/ Setting Codes
- Other Post-Field Unit Boundaries
- USFS Timber Types for Volc 4-7
- Eagle Tree Buffer of 330ft
- Existing & Rebuilt Roads
- F.S. Roads Under Construction
- Post-Field Proposed Roads
- Ahmu-Class 1 & Stream Chantypes
- Ahmu-Class 2 & Stream Chantypes
- Ahmu-Class 3 & Stream Chantypes
- Channel Type Change

- Lakes and Ponds
- Second Growth Units
- MMI 4
- McGilvery > 41
- Landings
- Stream & Lake NoCUT Buffers

May 17, 1994

.5 MILE

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

| | | | |
|--|--|---|--------------------------|
| VCU #: 597 | UNIT #: 422 | QUARTER QUAD: C3NE | PHOTO YR/#: 1991/990-165 |
| ACRES: 22.4 | VOL.: 619.5 MBF | LOGGING SYSTEM: Highlead | |
| LANDSCAPE ZONE: Unit is located within the Drumlin Area, and 30 Road Corridor. | | | |
| Timber/Vegetation | Field Review: T. Stecher/B. Hasebe, 6/14/93 | Office Review: J. Goering | |
| Species composition predominantly hemlock and cedar with a few spruce present. Regeneration mostly on nurse logs and consists of hemlock. Low to moderate amounts of mistletoe infection evident in canopy. Moderate stem decay evident in the large cedar. Promote spruce/cedar regeneration through planting. | | | |
| Logging/Transportation | Field Review: J. Doyal/J. Estabrook, 8/15/93 | Office Review: E. Urstadt | |
| Two spurs are needed to harvest this unit. Harvest system is uphill logging using highlead on medium sized tower. <u>Alternative tailholds or tie-backs may be needed in the northeast and southeast.</u> Blowdown is not a problem. Partial cutting is not recommended. Unit is economical. | | | |
| Watershed/Fisheries | Field Review: J. Knutzen/B. Romey, 6/07/93 | Office Review: G. McNaughton | |
| 100' buffer on lake with additional 400' selective harvest buffer. 100' buffer on stream to the south. | | | |
| Soils/Geology | Field Review: B. Romey, 6/08/93 | Office Review: G. McNaughton | |
| Flat; no unstable soils. | | | |
| Wildlife | Field Review: C. Confer/H. Sloan/K. Smayda, 6/08/93 | Office Review: M. Hall | |
| Buffer two wetlands found on western and southwestern end of unit (100') due to importance of habitat to wildlife. Recent heavy bear use documented as well as wolf sign. Lake is approximately 40 acres and east of unit. Western toad observed by lake. Game trail circled edge of lake. Woodpecker cavities identified. Buffer muskegs 1 and 2 (100'). <u>Retain Level 1 structure.</u> Avoid disturbance of wintering trumpeter swans by avoiding all human activity within 0.5 mile of known swan wintering areas during October 15 through March 15. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit is not visible from any priority travel routes or use areas. Adjacent to the main road and a lake with recreational opportunities. Seen from Road 30 in Foreground. Maximum Modification VQO. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Lake requires 100' no harvest buffer and 400' selective cut buffer. Class I stream south of unit requires 100' no-cut buffer. Type B clearcut because of mistletoe. Remove mistletoe infested trees where possible. Mitigation measures for this unit are: F5, F8, W4, and W11. | | | |

NO UNIT MAP

UNIT DROPPED OR DEFERRED

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

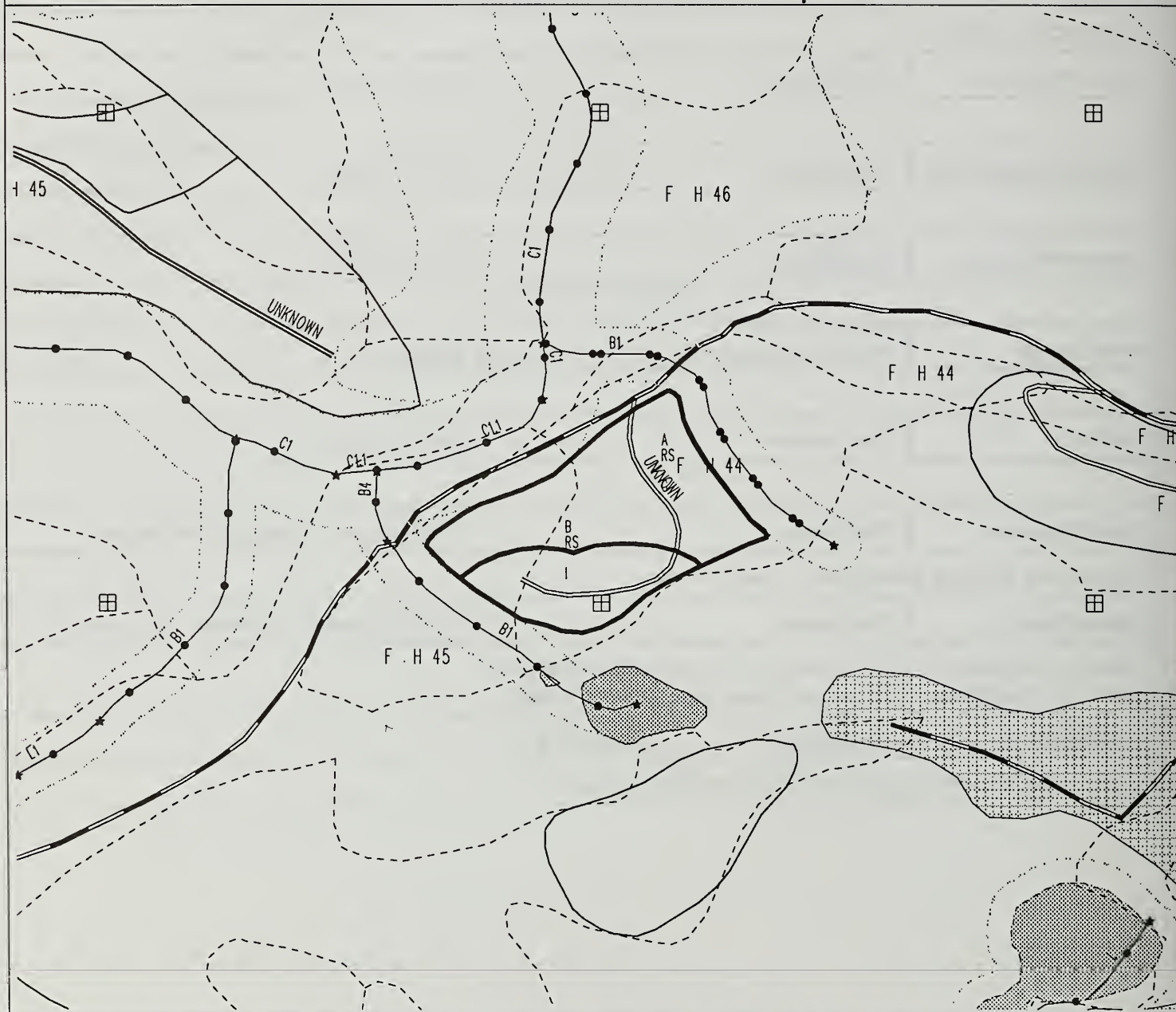
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|---|---------------|---|------------------|
| VCU #: 597 | UNIT #: 423 | QUARTER QUAD: | PHOTO YR/#: 1991 |
| ACRES: | VOL.: | LOGGING SYSTEM: | |
| LANDSCAPE ZONE: | | | |
| Timber/Vegetation | Field Review: | Office Review: | |
| | | | |
| Logging/Transportation | Field Review: | Office Review: | |
| | | | |
| Watershed/Fisheries | Field Review: | Office Review: | |
| | | | |
| Soils/Geology | Field Review: | Office Review: | |
| | | | |
| Wildlife | Field Review: | Office Review: | |
| | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit not seen from any priority travel route or use area. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | Reviewed By: | |
| Unit is adjacent to 1987 clearcut on eastern boundary. Deferred. | | | |

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

VCU : 597.2

UNIT : 424

QUAD : C3-NE



- Revised Control Lake Project Boundary
- Post-Field Unit Boundary w/ Setting Codes
- Other Post-Field Unit Boundaries
- USFS Timber Types for Volc 4-7
- Eagle Tree Buffer of 330ft
- Existing & Rebuilt Roads
- F.S. Roads Under Construction
- Post-Field Proposed Roads
- Ahmu-Class 1 & Stream Chantypes
- Ahmu-Class 2 & Stream Chantypes
- Ahmu-Class 3 & Stream Chantypes
- Chonnel Type Change

- Lakes and Ponds
- Second Growth Units
- MMI 4
- McGilvery > 41
- Landings
- Stream & Lake NoCUT Buffers

August 03, 1994

.5 MILE

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

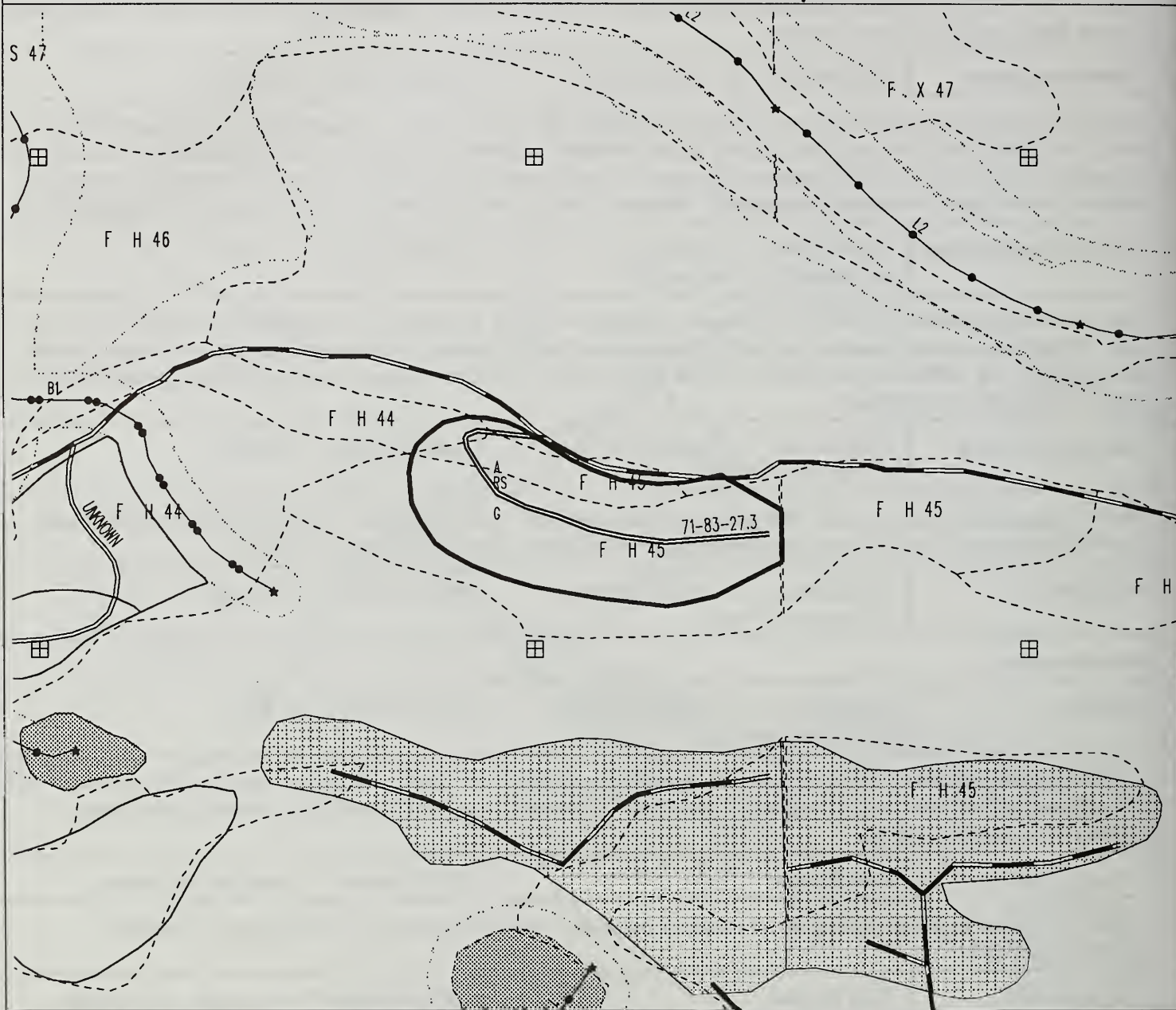
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|---|---|---|--------------------------|
| VCU #: 597 | UNIT #: 424 | QUARTER QUAD: C3NE | PHOTO YR/#: 1991/990-165 |
| ACRES: 15.9 | VOL.: 474.5 MBF | LOGGING SYSTEM: Running Skyline/Swingyarder | |
| LANDSCAPE ZONE: Unit is within the Drumlin area, second 1/4 mile of Thorne River Scenic Corridor, the proposed Honker Block, and in 30 Road Corridor. | | | |
| Timber/Vegetation | Field Review: M. Case, 8/13/93 | Office Review: J. Goering | |
| Species composition predominantly hemlock and cedar with a few spruce present. Regeneration predominantly hemlock with a few spruce but is lacking cedar. Fairly dense understory vegetation. Some poor soil drainage areas. Muskeg inclusions within the unit. Low to moderate amounts of mistletoe infection evident in canopy. Harvest all mistletoe infected hemlock and cut infected regeneration. Promote spruce/cedar regeneration through planting or seedtree harvest. | | | |
| Logging/Transportation | Field Review: J. Estabrook/ M. Hoshall/C. Giles, 6/13/93 | Office Review: E. Urstadt | |
| Unit is accessed by Road #71-83-27.2. This unit is adjacent to USFS Road #30. A swing yarder can harvest the entire unit. Partial suspension is possible, although not required. The SE boundary will need tie-backs for tailholds. Partial cut is feasible. A 100 foot stream buffer is on the SW boundary. Determine stream class on NE during final layout; no buffer is flagged. Fair economics. | | | |
| Watershed/Fisheries | Field Review: H. Spolar/C. Confer/ K. Smayda, 6/08/93 | Office Review: T. Stewart | |
| Class I stream on west end of unit - 100' buffer required plus 100' selective harvest. Class IIa stream on east of unit - 100' buffer required. Lake south of unit does require a 100' no cut and 400' selective cut buffer. | | | |
| Soils/Geology | Field Review: H. Solan/C. Confer/ K. Smayda, 6/08/93 | Office Review: T. Stewart | |
| No soil concerns. | | | |
| Wildlife | Field Review: H. Solan/C. Confer/ K. Smayda, 6/08/93 | Office Review: M. Hall | |
| Level 1 structure retention. Lake south corner of unit. Low wildlife use noted. No special concerns. Avoid disturbance of wintering trumpeter swans by avoiding all human activity within 0.5 mile of known swan wintering areas during October 15 through March 15. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit is not visible from any priority travel routes or use areas. Seen from Road 30 in Foreground. Maximum Modification VQO. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Class I stream on west side of unit requires 100' TTRA buffer plus additional 100' selective harvest (Type I). Class II stream on east side requires 100' buffer. Lake south of unit requires a 100' no-cut and 400 foot selective cut buffer. Shelterwood cut, Type G, leaving groups between yarding corridors. Remove mistletoe infected hemlock. Mitigation measures for this unit are: F5, F8, and W2. | | | |

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

VCU : 597.2

UNIT : 425

QUAD : C3-NE



- | | | | |
|--|---|--|-----------------------------|
| | Revised Control Lake Project Boundary | | Lakes and Ponds |
| | Post-Field Unit Boundary w/ Setting Codes | | Second Growth Units |
| | Other Post-Field Unit Boundaries | | MMI 4 |
| | USFS Timber Types for Volc 4-7 | | McGilvery > 41 |
| | Eagle Tree Buffer of 330ft | | Landings |
| | Existing & Rebuilt Roads | | Stream & Lake NoCUT Buffers |
| | F.S. Roads Under Construction | | |
| | Post-Field Proposed Roads | | |
| | Ahmu-Class 1 & Stream Chantypes | | |
| | Ahmu-Class 2 & Stream Chantypes | | |
| | Ahmu-Class 3 & Stream Chantypes | | |
| | Channel Type Change | | |

May 17, 1994

.5 MILE

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

| | | | |
|---|--|---|--------------------------|
| VCU #: 597 | UNIT #: 425 | QUARTER QUAD: C3NE | PHOTO YR/#: 1991/990-164 |
| ACRES: 18 | VOL.: 667.7 MBF | LOGGING SYSTEM: Swingyarder/Running Skyline | |
| LANDSCAPE ZONE: Unit is within second 1/4 mile of Thorne River Scenic Corridor, in the Drumlin Area, the 30 Road Corridor, and the Angel Lake Corridor. | | | |
| Timber/Vegetation | Field Review: S. Karstens, 8/16/93 | Office Review: J. Goering | |
| Species composition predominantly hemlock with some cedar. Few spruce are present. Regeneration mostly on nurse logs and consists of hemlock. Lacking spruce and western red cedar regeneration. Low to moderate amounts of mistletoe infection evident in canopy. Good advanced regeneration (candidate for release) consisting of hemlock. Salmonberry present throughout area. Harvest all mistletoe infected hemlock and cut infected regeneration. Promote spruce/cedar regeneration through planting. | | | |
| Logging/Transportation | Field Review: E. Urstadt/K. Martin, 6/28/93 | Office Review: E. Urstadt | |
| Unit can be swingyarded to continuous roadside landing. Unit is accessed by Rd #71-83-27.3 which has 1,800' of easy construction. Partial cut is feasible. Unit is adjacent to and visible from USFS Road 30. A swingyarder is recommended to harvest the entire unit. A running skyline will assure partial suspension on most of the unit, although partial suspension is not required. Guystumps and tailstumps are good. Blowdown is not a problem. Good economics. | | | |
| Watershed/Fisheries | Field Review: J. Metzler/R. Rogers, 6/24/93 | Office Review: T. Stewart | |
| No streams in or adjacent to unit. | | | |
| Soils/Geology | Field Review: J. Metzler/R. Rogers, 6/24/93 | Office Review: T. Stewart | |
| No special concerns. No instability noted. | | | |
| Wildlife | Field Review: R. Rogers, 6/24/93 | Office Review: M. Hall | |
| No special concern - retain Level 1 structure retention. Avoid disturbance of wintering trumpeter swans by avoiding all human activity within 0.5 mile of known swan wintering areas during October 15 through March 15. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit is not visible from any priority travel routes or use areas. Seen from Road 30 in Foreground. Maximum Modification VQO. | | | |
| Cultural/Lands | Field Review: S. Moorhead, 7/22/93 | Office Review: T.W. Greiser | |
| Cultural - Unit is partially or completely within high probability area for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Shelterwood cut, Type G, leaving groups between yarding corridors. Remove mistletoe infected hemlock. Mitigation measures for this unit are: F5, F8, and W2. | | | |

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

VCU : 597.2

UNIT : 426

QUAD : C3-NE



- Revised Control Lake Project Boundary
- Post-Field Unit Boundary w/ Setting Codes
- Other Post-Field Unit Boundaries
- USFS Timber Types for Volc 4-7
- Eagle Tree Buffer of 330ft
- Existing & Rebuilt Roads
- F.S. Roads Under Construction
- Post-Field Proposed Roads
- Ahmu-Class 1 & Stream Chantypes
- Ahmu-Class 2 & Stream Chantypes
- Ahmu-Class 3 & Stream Chantypes
- Channel Type Change

- Lakes and Ponds
- Second Growth Units
- MMI 4
- McGilvery > 41
- Landings
- Stream & Lake NoCUT Buffers

May 17, 1994

.5 MILE

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

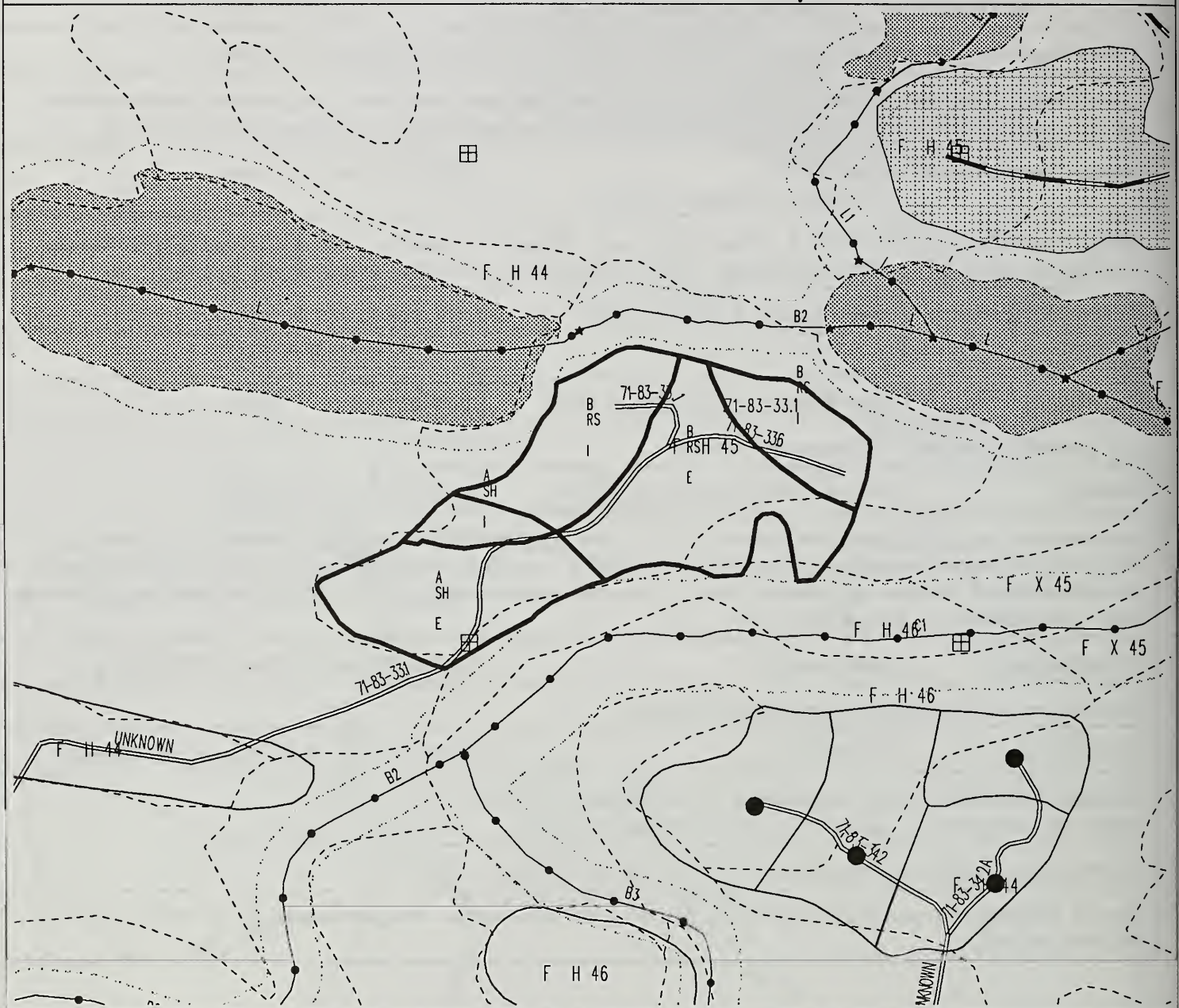
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|---|---|---|--------------------------|
| VCU #: 597 | UNIT #: 426 | QUARTER QUAD: C3NE | PHOTO YR/#: 1991/990-164 |
| ACRES: 12.4 | VOL.: 233.7 MBF | LOGGING SYSTEM: Shovel | |
| LANDSCAPE ZONE: Unit is within the Rio Beaver Watershed. | | | |
| Timber/Vegetation | Field Review: S. Karstens, 7/1/93 | Office Review: J. Goering | |
| Species composition predominantly hemlock with some cedar. Few spruce are present. Regeneration mostly on nurse logs and consists of hemlock. Sparse spruce and western red cedar regeneration. Salal present throughout area. | | | |
| Logging/Transportation | Field Review: T. Wetzel/J. Herzberg, 8/28/93 | Office Review: E. Urstadt | |
| Unit is accessed by Road #71-83-33.1. Shovel log to road. Partial cut is feasible. Unit is approximately five acres. Recommend cutting merchantable timber only. This would improve economics. Fair economics. | | | |
| Watershed/Fisheries | Field Review: B. Romey, 6/28/93 | Office Review: T. Stewart | |
| Stream 1 needs a 100' buffer. | | | |
| Soils/Geology | Field Review: M. Minnillo, 6/28/93 | Office Review: T. Stewart | |
| Dry site with low slopes. No windthrow or slumps. | | | |
| Wildlife | Field Review: M. Minnillo, 6/28/93 | Office Review: M. Hall | |
| Moderate deer use. Good hiding and bedding cover for deer and bear. Woodpecker sign observed. Unit serves as a travel corridor between muskegs. Recommend partial cutting entire unit to maintain cover. Level 3 structure retention. Avoid disturbance of wintering trumpeter swans by avoiding all human activity within 0.5 mile of known swan wintering areas during October 15 through March 15. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit not seen from any priority travel route or use area. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | Reviewed By: | |
| Type H shelterwood to provide structure and help provide for regeneration. Mitigation measures for this unit are: F5, F8, F10, and W2. | | | |

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

VCU : 597.2

UNIT : 427

QUAD : C3-NE



- Revised Control Lake Project Boundary
- Post-Field Unit Boundary w/ Setting Codes
- Other Post-Field Unit Boundaries
- USFS Timber Types for Volc 4-7
- Eagle Tree Buffer of 330ft
- Existing & Rebuilt Roads
- F.S. Roads Under Construction
- Post-Field Proposed Roads
- Ahmu-Class 1 & Stream Chantypes
- Ahmu-Class 2 & Stream Chantypes
- Ahmu-Class 3 & Stream Chantypes
- Channel Type Change

- Lakes and Ponds
- Second Growth Units
- MMI 4
- McGilvery > 41
- Landings
- Stream & Lake NoCUT Buffers

June 09, 1994

.5 MILE

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

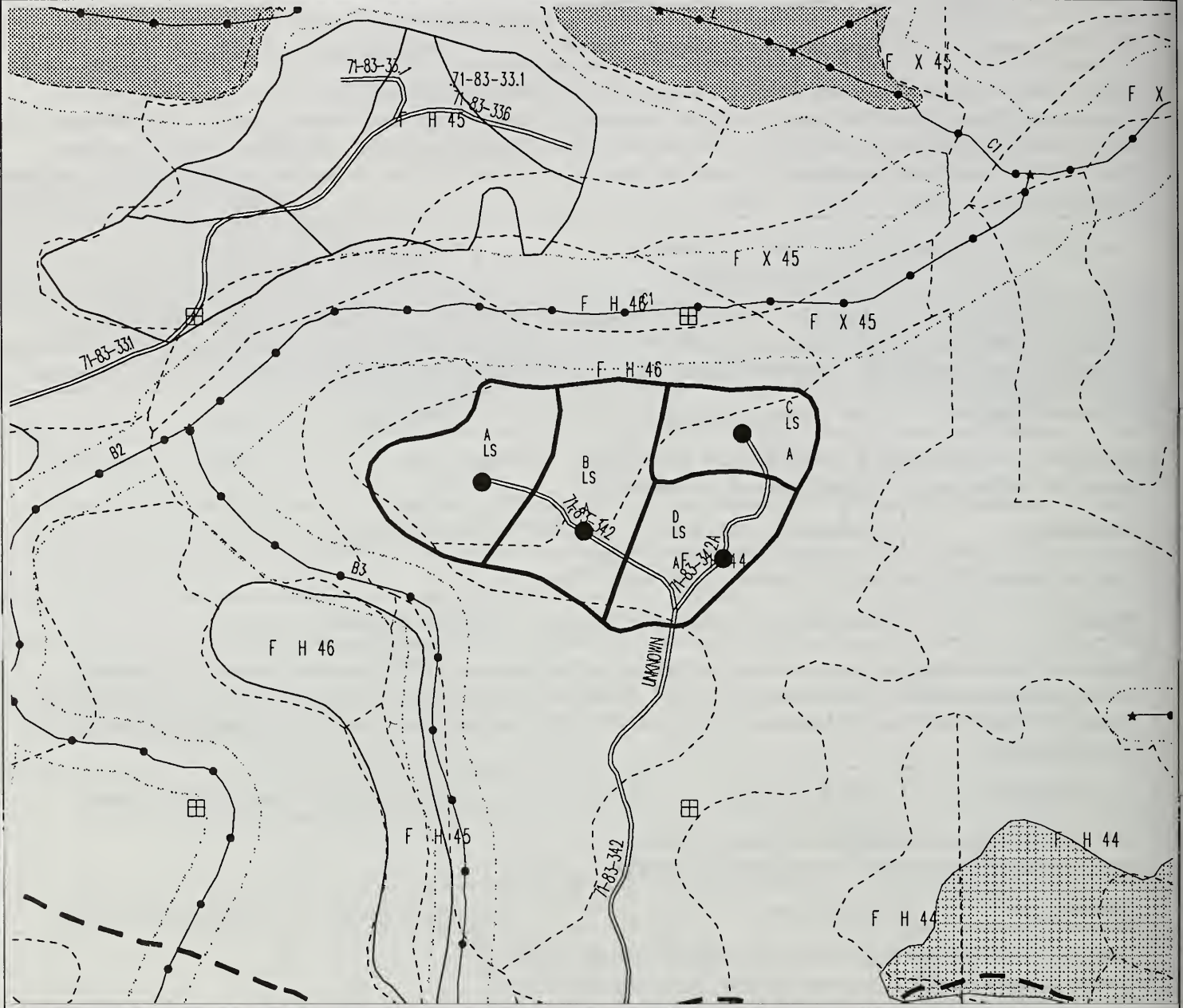
| | | | |
|---|--|---|--------------------------|
| VCU #: 597 | UNIT #: 427 | QUARTER QUAD: C3NE | PHOTO YR/#: 1991/990-164 |
| ACRES: 34 | VOL.: 807.4 MBF | LOGGING SYSTEM: Swingyarder/Running Skyline, Shovel | |
| LANDSCAPE ZONE: Unit is within Rio Beaver Watershed. | | | |
| Timber/Vegetation | Field Review: J. Goering, 7/8/93 | Office Review: J. Goering | |
| Species composition predominantly hemlock with some cedar. Few spruce are present. Predominantly hemlock regeneration. Sparse spruce and western red cedar regeneration. Many bogs, small streams, and poor soil drainage areas. Good advanced regeneration (candidate for release) consisting of hemlock and cedar. Windthrow potential minimal. Promote spruce and cedar regeneration through shelterwood or seed tree harvest. Minimize soil compaction/displacement and avoid yarding through bog/stream areas. | | | |
| Logging/Transportation | Field Review: T. Wetzel/ J. Herzberg, 8/28/93 | Office Review: E. Urstadt | |
| Unit is accessed by Road #71-83-33.1. Recommend swing yarding the north 2/3 and shovel logging the south 1/3. Partial cut is feasible. Partial suspension is possible on 80% of the swing yard setting. A 100 foot stream buffer is along the north boundary and lakes. The south boundary has a 200 foot stream buffer due to a slope break. Fair economics. | | | |
| Watershed/Fisheries | Field Review: B. Romey, 6/28/93 | Office Review: T. Stewart | |
| Both lakes need 100' buffer plus 400' selective harvest buffer. Stream 2 needs 100' buffer. Stream 1 on south side needs 100' buffer plus 100' no-programmed harvest buffer. | | | |
| Soils/Geology | Field Review: M. Minnillo, 6/28/93 | Office Review: T. Stewart | |
| Low, dry slopes, No concerns. No stability problems. | | | |
| Wildlife | Field Review: M. Minnillo, 6/28/93 | Office Review: M. Hall | |
| Snags will be maintained in stream and lake buffers, as well as riparian corridor along the southern unit boundary. Level 1 structure retention. Goose scat seen in unit. Lakes to the northeast and northwest of unit. Avoid disturbance of trumpeter swans by avoiding all human activity within 0.5 mile of known swan wintering areas during October 15 through March 15. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit not seen from any priority travel route or use area. Lake adjacent to unit provides recreational opportunities. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Lakes northeast and northwest require 100' no harvest buffer and 400' selective harvest. Stream on south side requires 100' no harvest and 100' no-programmed harvest buffer. Stream on north side requires 100' buffer. Type E overstory removal in main unit; type I group selection in lake selective cut buffer. Mitigation measures for this unit are: F5, F8, W2, and W11. | | | |

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

VCU : 597.2

UNIT : 428

QUAD : C3-NE



- | | | | |
|--|---|--|-----------------------------|
| | Revised Control Lake Project Boundary | | Lakes and Ponds |
| | Post-Field Unit Boundary w/ Setting Codes | | Second Growth Units |
| | Other Post-Field Unit Boundaries | | MMI 4 |
| | USFS Timber Types for Volc 4-7 | | McGilvery > 41 |
| | Eagle Tree Buffer of 330ft | | Landings |
| | Existing & Rebuilt Roads | | Stream & Lake NoCUT Buffers |
| | F.S. Roads Under Construction | | |
| | Post-Field Proposed Roads | | |
| | Ahmu-Class 1 & Stream Chantypes | | |
| | Ahmu-Class 2 & Stream Chantypes | | |
| | Ahmu-Class 3 & Stream Chantypes | | |
| | Channel Type Change | | |

.5 MILE

June 09, 1994

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

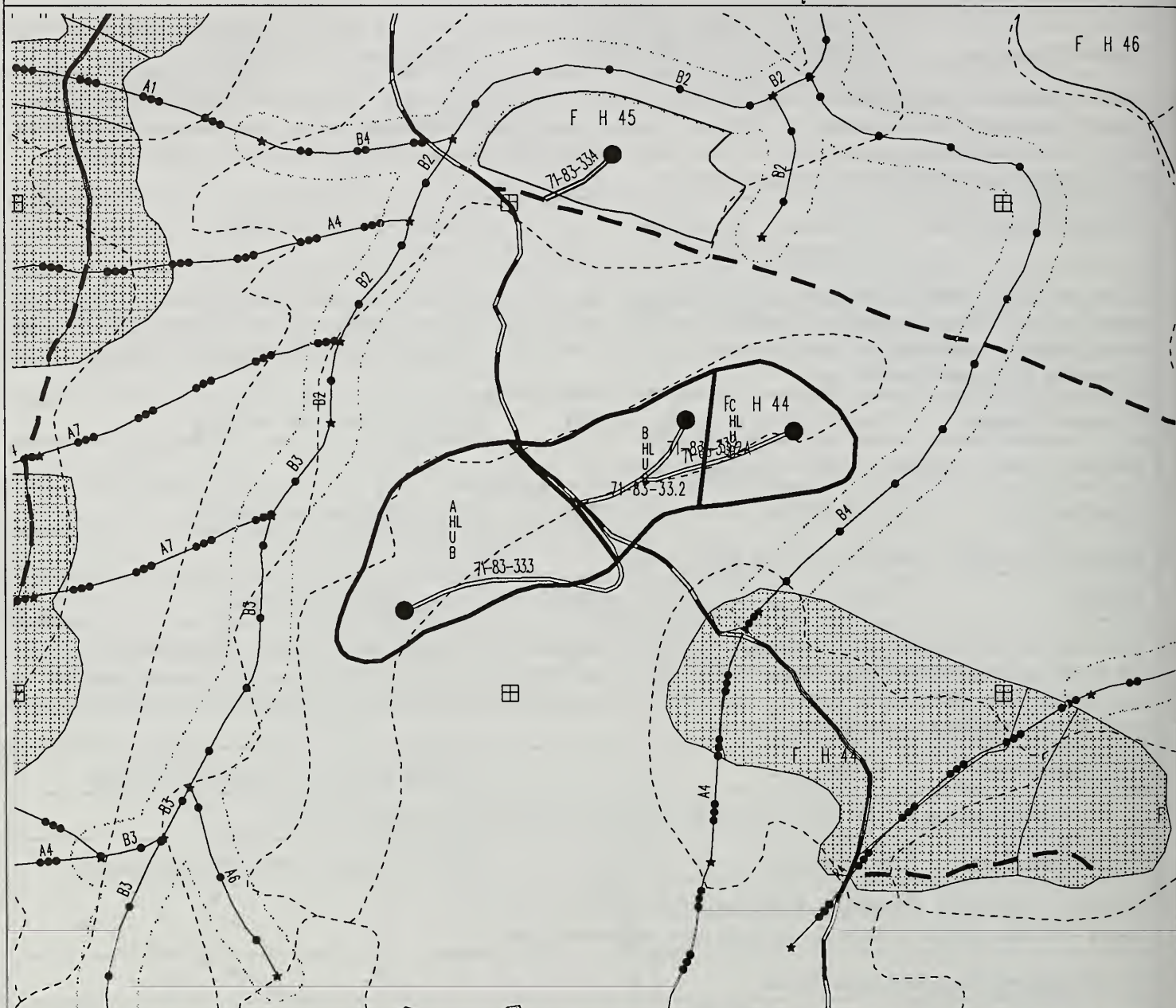
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|---|---|---|--------------------------|
| VCU #: 597 | UNIT #: 428 | QUARTER QUAD: C3NE | PHOTO YR/#: 1991/990-164 |
| ACRES: 29.7 | VOL.: 885.7 MBF | LOGGING SYSTEM: Live Skyline with 70' Tower | |
| LANDSCAPE ZONE: Unit is within Rio Beaver Watershed. | | | |
| Timber/Vegetation | Field Review: B. Hasebe, 7/5/93 | Office Review: J. Goering | |
| Species composition predominantly hemlock and cedar with a few spruce present. Predominantly hemlock regeneration. Sparse western red cedar regeneration. Muskeg incursions incorporated with mixed species, low volume timber in some areas. Low to moderate amounts of stem decay evident in hemlock and cedar. Salal present in the central portion of unit. Promote spruce regeneration through planting. | | | |
| Logging/Transportation | Field Review: E. DeWilde/ J. Herzberg, 8/30/93 | Office Review: K. Jehnke | |
| Proposed logging system is 70' tower with live skyline. Shovel log flat areas. Maximum yarding distance of 600'; 100% uphill yarding. Partial suspension is available over most of the unit. If partial suspension is not required, this unit could be highleaded. Smaller yarder could be utilized with the construction of approximately 500' of road. A slackline system is required if the unit is partial cut. | | | |
| Watershed/Fisheries | Field Review: B. Romey, 6/28/93 | Office Review: A. Wolfson | |
| Stream 1, Class I - 200' no-cut buffer for channel type C1. | | | |
| Soils/Geology | Field Review: M. Minnillo, 6/28/93 | Office Review: A. Wolfson | |
| Slopes of 0% to 20%. Southwest portion of unit is wet. | | | |
| Wildlife | Field Review: M. Minnillo, 6/28/93 | Office Review: M. Hall | |
| Maintain east unit boundary out of muskeg to maintain hiding/bedding cover for deer and bear. Recommend at least 50' to 75' no-cut on this muskeg. Snags will be maintained within Class I stream buffer; Level 1 structure retention. Avoid disturbance of wintering trumpeter swans by avoiding all human activity within 0.5 mile of known swan wintering areas during October 15 through March 15. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit is not visible from any priority travel routes or use areas. Maximum modification VQO. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Stream on north side of unit requires 200' no harvest buffer. Type A clearcut. Mitigation measures for this unit are: F5, F8, and W5. | | | |

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

VCU : 597.2

UNIT : 430

QUAD : C3-NE



- Revised Control Lake Project Boundary
- Post-Field Unit Boundary w/ Setting Codes
- Other Post-Field Unit Boundaries
- USFS Timber Types for Volc 4-7
- Eagle Tree Buffer of 330ft
- Existing & Rebuilt Roads
- F.S. Roads Under Construction
- Post-Field Proposed Roads
- Ahmu-Class 1 & Stream Chatypes
- Ahmu-Class 2 & Stream Chatypes
- Ahmu-Class 3 & Stream Chatypes
- Channel Type Change

- Lakes and Ponds
- Second Growth Units
- MMI 4
- McGilvery > 41
- Landings
- Stream & Lake NoCUT Buffers

May 23, 1994

.5 MILE

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

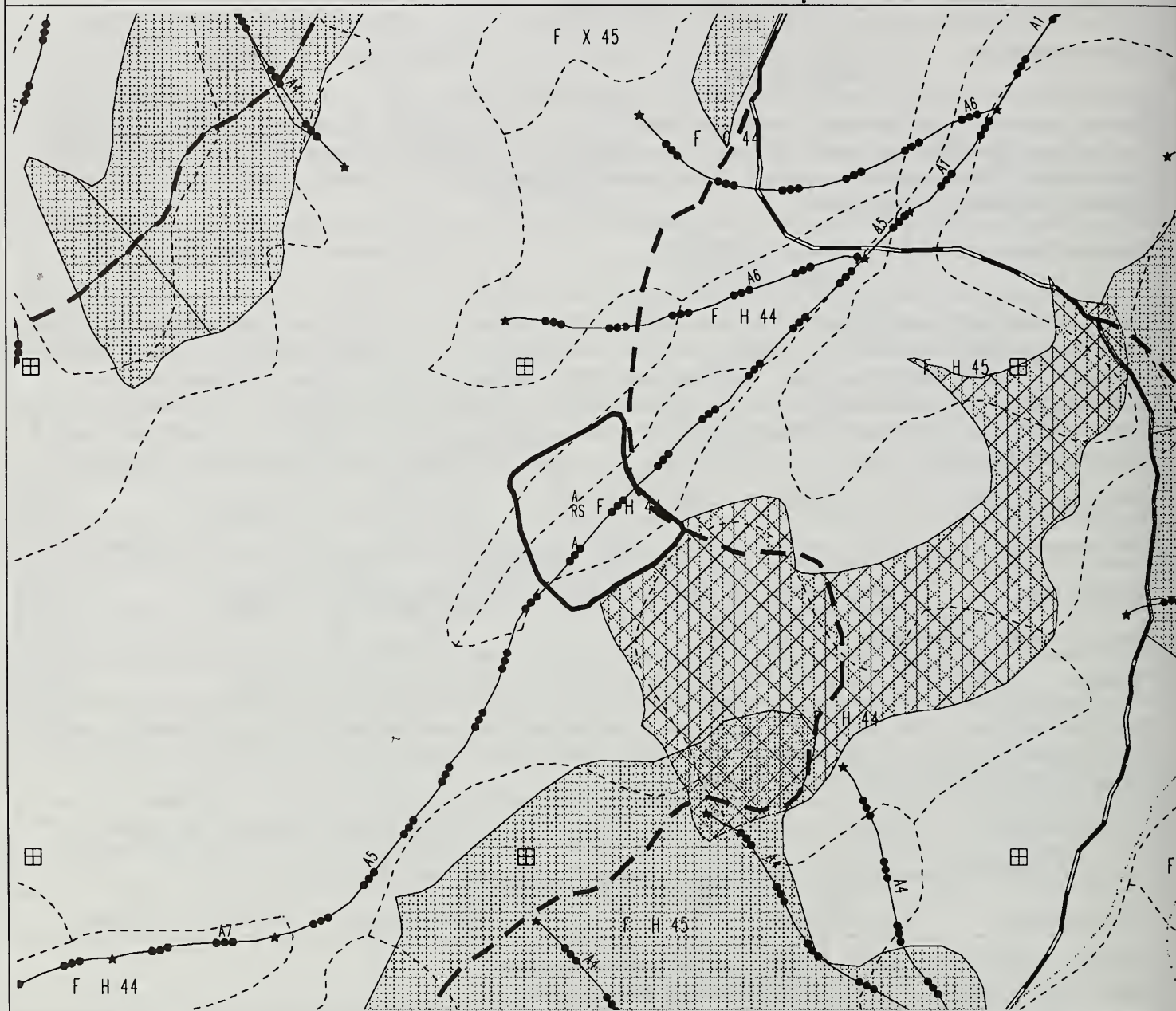
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|---|---|---|--------------------------|
| VCU #: 597 | UNIT #: 430 | QUARTER QUAD: C3NE | PHOTO YR/#: 1991/990-164 |
| ACRES: 26.3 | VOL.: 252.5 MBF | LOGGING SYSTEM: Highlead with 70' Tower | |
| LANDSCAPE ZONE: Unit is within Rio Beaver Watershed. | | | |
| Timber/Vegetation | Field Review: M. Case/ J. Miller, 6/17/93 | Office Review: J. Goering | |
| Species composition predominantly hemlock and cedar with a few spruce present. Regeneration predominantly hemlock but includes a few cedar and spruce. Muskeg incursions incorporated with mixed species, low volume, multi-canopy stand with < 50% canopy closure and low site productivity. Alaska yellowcedar decline evident. Fairly dense understory vegetation including salal. | | | |
| Logging/Transportation | Field Review: J. Doyal/ J. Herzberg, 6/15/93 | Office Review: K. Martin | |
| Ninety percent uphill cable logging. Field crew suggested 90' tower and a live skyline, but it appears that a 70' tower or swingyarder would be satisfactory. Yarding distances are relatively short - 400' to 600'. Maximum yarding distance appears to be 1,000' from the unit map. Approximately 30% of unit may be shovel logged. No partial suspension requirements noted. Partial suspension may be difficult northeast of landing due to low slopes. Guy stumps fair to poor, may require tiebacks. Tailholds are poor along most of the boundaries except good along east and south ends. Poor tailtrees. No blind leads or leave areas noted. Field crew verification suggests clearcut due to residual tree damage. | | | |
| Watershed/Fisheries | Field Review: M. Minnillo, 6/10/93 | Office Review: A. Wolfson | |
| No streams within unit. Class I stream on east side of unit requires 100' no harvest and 50' selective cut buffer. | | | |
| Soils/Geology | Field Review: M. Minnillo, 6/10/93 | Office Review: A. Wolfson | |
| No soils concerns. Gentle slopes. | | | |
| Wildlife | Field Review: M. Minnillo, 6/10/93 | Office Review: M. Hall | |
| Deer use low in unit. Two sandhill cranes flew out of muskeg north of west portion of unit; may be nesting in area. Avoid muskegs on northwest and southwest sides of unit. Retain Level 2 structure due to narrowness of affected old-growth patch and proximity to several large HCC's. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit is not visible from any priority travel routes or use areas. Maximum Modification VQO. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Class I stream to east of unit requires 100' no harvest and additional 50' selective harvest buffer. Type B clearcut to retain Level 2 structure. Mitigation measures for this unit are: F5, F8, W4, and W11. | | | |

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

VCU : 597.2

UNIT : 431

QUAD : C3-NE



- Revised Control Lake Project Boundary
- Post-Field Unit Boundary w/ Setting Codes
- Other Post-Field Unit Boundaries
- USFS Timber Types for Volc 4-7
- Eagle Tree Buffer of 330ft
- Existing & Rebuilt Roads
- F.S. Roads Under Construction
- Post-Field Proposed Roads
- Ahmu-Class 1 & Stream Chantypes
- Ahmu-Class 2 & Stream Chantypes
- Ahmu-Class 3 & Stream Chantypes
- Channel Type Change

- Lakes and Ponds
- Second Growth Units
- MMI 4
- McGilvery > 41
- Landings
- Stream & Lake NoCUT Buffers

May 17, 1994

.5 MILE

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

| | | | |
|--|------------------------------------|---|--------------------------|
| VCU #: 597 | UNIT #: 431 | QUARTER QUAD: C3NE | PHOTO YR/#: 1991/990-162 |
| ACRES: 7.4 | VOL.: 82.4 MBF | LOGGING SYSTEM: Swingyarder/Running Skyline | |
| LANDSCAPE ZONE: Unit is within Rio Beaver Watershed . | | | |
| Timber/Vegetation | Field Review: M. Case, 7/10/93 | Office Review: J. Goering | |
| Species composition predominantly hemlock with some cedar. Few spruce are present. Regeneration predominantly hemlock and includes some cedar but is lacking spruce. Fairly dense understory vegetation. Salal present. Muskeg incursions incorporated with mixed species, low volume timber in some areas. Moderately low volume, multi-canopy stand with < 50% canopy closure and relatively low site productivity. Some thin soil, poor soil drainage areas. Slope instability/failure potential existing due to soil water movement. Small slides evident. | | | |
| Logging/Transportation | Field Review: S. Field, 9/03/93 | Office Review: E. Urstadt | |
| Unit is accessed by USFS Road #3013. Unit can be downhill yarded to road. A swing yarder is recommended. Partial suspension is not required and may not be possible. Partial cut is not recommended due to lack of good "lift". Tailholds may need tie-backs. Fair economics. | | | |
| Watershed/Fisheries | Field Review: B. Romey, 6/10/93 | Office Review: T. Stewart | |
| Split yard and directional fall away from stream. No logs pulled through inner slope of stream banks. | | | |
| Soils/Geology | Field Review: M. Minnillo, 6/10/93 | Office Review: T. Stewart | |
| Pistol butt trees along north side and in south-central portion of the unit. Wet site with slopes of 50% to 70%. | | | |
| Wildlife | Field Review: M. Minnillo, 6/10/93 | Office Review: M. Hall | |
| Sapsuckers heard and observed. Cavity tree(s) in unit. High use cavity dependent species habitat. Maintain Level 1 structure retention. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit is not visible from any priority travel routes or use areas. Maximum Modification VQO. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Type A clearcut. Achieve maximum possible suspension. Leave trees in unstable areas where partial suspension not possible. Split yard and directional falling for Class III stream. Mitigation measures for this unit are: F3, F6, F8, and W5. | | | |

NO UNIT MAP
UNIT DROPPED OR DEFERRED

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

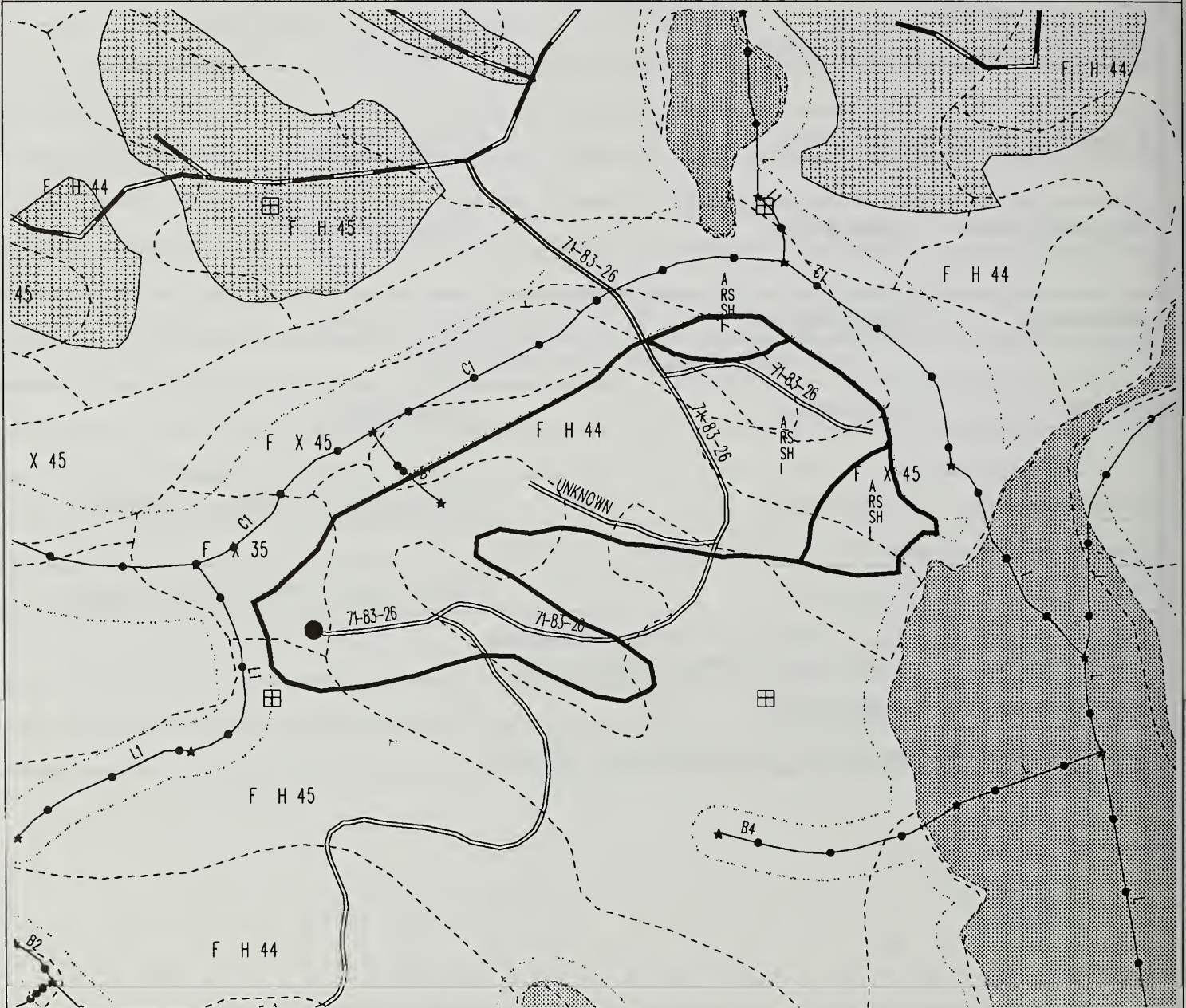
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|---|---------------|---|-------------|
| VCU #: 597 | UNIT #: 432 | QUARTER QUAD: | PHOTO YR/#: |
| ACRES: | VOL.: | LOGGING SYSTEM: | |
| LANDSCAPE ZONE: | | | |
| Timber/Vegetation | Field Review: | Office Review: | |
| | | | |
| Logging/Transportation | Field Review: | Office Review: | |
| | | | |
| Watershed/Fisheries | Field Review: | Office Review: | |
| | | | |
| Soils/Geology | Field Review: | Office Review: | |
| | | | |
| Wildlife | Field Review: | Office Review: | |
| | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit not seen from any priority travel route or use area. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Unit is adjacent to 1991 clearcut on eastern unit boundary. Deferred. | | | |

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

VCU : 597.2

UNIT : 434

QUAD : C2-NW



- Revised Control Lake Project Boundary
- Post-Field Unit Boundary w/ Setting Codes
- Other Post-Field Unit Boundaries
- USFS Timber Types for Volc 4-7
- Eagle Tree Buffer of 330ft
- Existing & Rebuilt Roads
- F.S. Roads Under Construction
- Post-Field Proposed Roads
- Ahmu-Class 1 & Stream Chantypes
- Ahmu-Class 2 & Stream Chantypes
- Ahmu-Class 3 & Stream Chantypes
- Channel Type Change

- Lakes and Ponds
- Second Growth Units
- MMI 4
- McGilvery > 41
- Landings
- Stream & Lake NoCUT Buffers

May 17, 1994

.5 MILE

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

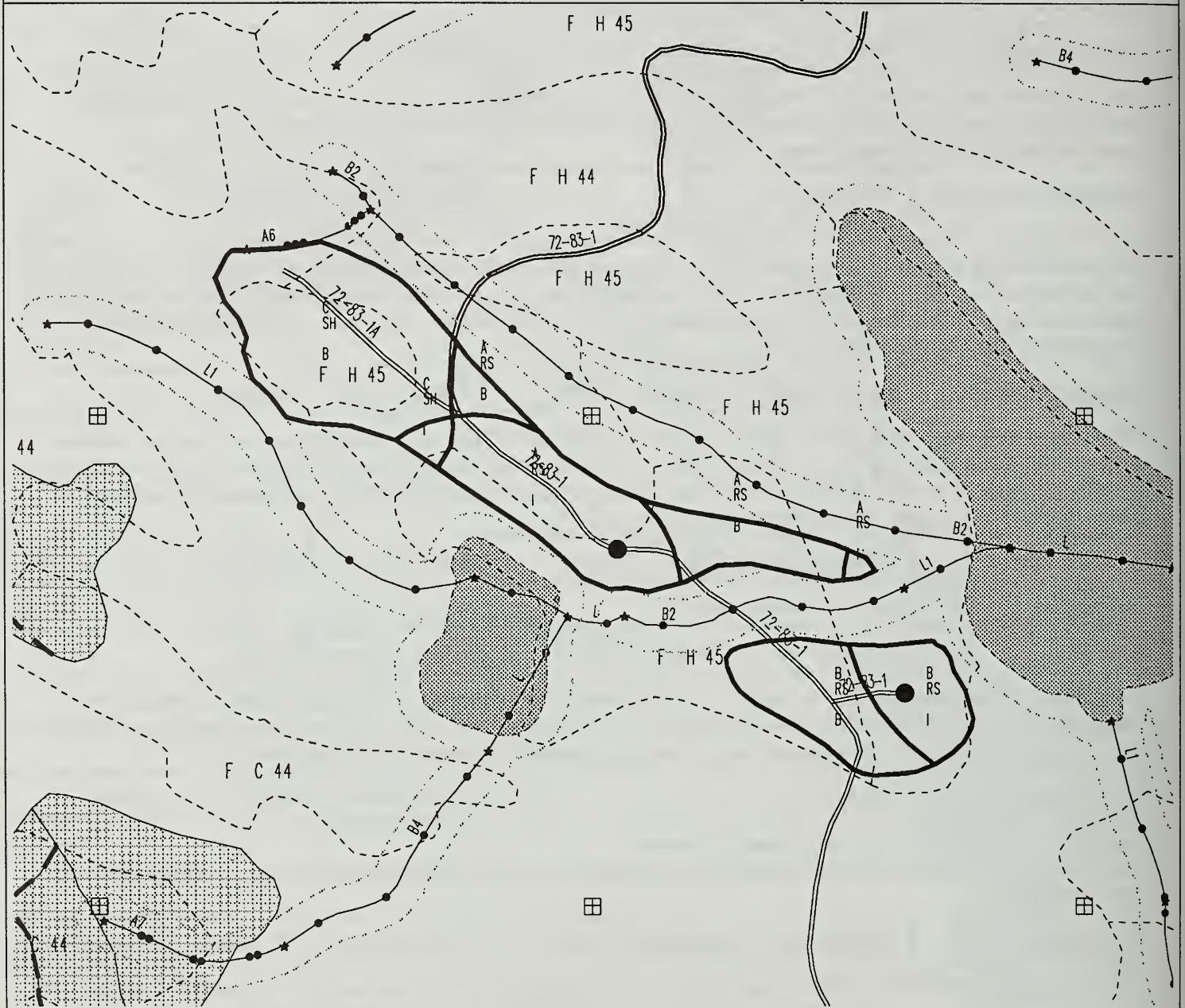
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|---|---|---|-------------------------|
| VCU #: 597 | UNIT #: 434 | QUARTER QUAD: C2NW | PHOTO YR/#: 1991/690-34 |
| ACRES: 47.8 | VOL.: 1382.7 MBF | LOGGING SYSTEM: Swingyarder/Running Skyline | |
| LANDSCAPE ZONE: Unit is within Angel Lake Corridor. | | | |
| Timber/Vegetation | Field Review: T. Stecher, 7/10/93 | Office Review: J. Goering | |
| Species composition predominantly hemlock with some cedar. Few spruce are present. Regeneration predominantly hemlock with a few spruce but is lacking cedar. Light amount of mistletoe infection evident in canopy. Some thin soil, poor soil drainage areas. | | | |
| Logging/Transportation | Field Review: T. Wetzel/D. Foster, 8/24/93 | Office Review: M. Whitty | |
| Unit was originally accessed by Road #71-83-26. This road has a costly stream crossing. Recommend using other field verified road to Unit 597-435 (Road #72-83-1). Recommend swingyarder with running skyline. Profiles will be needed during final layout to confirm that full suspension will occur over the stream within unit. A 100 foot stream buffer is along the NW and NE boundaries. | | | |
| Watershed/Fisheries | Field Review: S. Tanguay, 6/28/93 | Office Review: T. Stewart | |
| Stream along north and east boundary requires 100' no commercial + 100' no program cut buffer. Lake to southeast requires 100' no cut plus 400' of selective cut buffer. Stream on west boundary requires 100' no cut buffer. Class III stream in westcentral portion of unit requires split yarding and directional falling at least, and should be reviewed for Class I habitat during higher flow prior to final layout. | | | |
| Soils/Geology | Field Review: S. Tanguay, 6/28/93 | Office Review: T. Stewart | |
| Low gradient, 0-15%, slopes. No stability concerns. | | | |
| Wildlife | Field Review: S. Tanguay, 6/28/93 | Office Review: M. Hall | |
| Heavy bear use and moderate deer use in unit. Bald eagle roost site identified. Wolf sign identified. Retain Level 1 structure; required buffers will help maintain structure. Avoid disturbance of wintering trumpeter swans by avoiding all human activity within 0.5 mile of known swan wintering areas during October 15 through March 15. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit not seen from any priority travel route or use area. Lake adjacent to unit provides some recreational opportunities. Leave road open after harvest; build parking for 5-6 vehicles near lake. | | | |
| Cultural/Lands | Field Review: S. Moorhead, 7/26/93 | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit inventoried for cultural resources due to location within high probability area for cultural resources. Culturally Modified Trees near mouth of stream on eastern boundary. Move boundary to avoid CMT's if possible. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Boundary moved to avoid CMT's. It has substantial second growth in immediate area. Partial cut (Type I uneven-aged management) in uphill yarded and flatter portions of unit, attempting to build upon large buffered areas, lake select cut buffer, and muskeg in unit. Partial cut as corridors in steeper downhill yarded areas. Select mistletoed hemlock for cutting. Mitigation measures for this unit are: C1, F5, F6, F8, F10, W2, and W11. | | | |

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

VCU : 597.2

UNIT : 435

QUAD : C2-NW



- Revised Control Lake Project Boundary
- Post-Field Unit Boundary w/ Setting Codes
- Other Post-Field Unit Boundaries
- USFS Timber Types for Volc 4-7
- Eagle Tree Buffer of 330ft
- Existing & Rebuilt Roads
- F.S. Roads Under Construction
- Post-Field Proposed Roads
- Ahmu-Class 1 & Stream Chantypes
- Ahmu-Class 2 & Stream Chantypes
- Ahmu-Class 3 & Stream Chantypes
- Channel Type Change

- Lakes and Ponds
- Second Growth Units
- MMI 4
- McGilvery > 41
- Landings
- Stream & Lake NoCUT Buffers

May 17, 1994

.5 MILE

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

| | | | |
|--|---|--|-------------------------|
| VCU #: 597 | UNIT #: 435 | QUARTER QUAD: C2NW | PHOTO YR/#: 1991/690-34 |
| ACRES: 34.6 | VOL.: 823.1 MBF | LOGGING SYSTEM: Running Skyline/Swingyarder with 70' Tower, Shovel | |
| LANDSCAPE ZONE: Unit is within the Angel Lake Corridor. | | | |
| Timber/Vegetation | Field Review: J. Miller, 8/16/93 | Office Review: J. Goering | |
| Species composition predominantly hemlock and cedar with a few spruce present. Predominantly hemlock regeneration. Sparse spruce and western red cedar regeneration. Low to moderate amounts of mistletoe infection evident in canopy. Moderate amounts of stem decay evident in cedar. Fairly dense understory vegetation. Promote spruce regeneration through seed tree harvest and/or planting. | | | |
| Logging/Transportation | Field Review: T. Wetzel/ D. Foster, 8/19/93 | Office Review: M. Whitty | |
| Shovel logging for northeast 1/2 of unit. The southeast corner of the northwest section of the unit contains a long corner with yarding distances up to 950'. A 70' tower will be required for marginal partial suspension here, as indicated by the critical profile. This area will be yarded to landing 48+40R which has guy stumps in a TTRA buffer. This area also has a 400' select harvest lake buffer recommended in the resource report. The lakes and streams in and around this unit have 3,700' of 100' buffer. Consider feasibility of road to Unit #597-124. | | | |
| Watershed/Fisheries | Field Review: J. Metzler/ M. Minnillo, 8/07/93 | Office Review: A. Wolfson | |
| There are two Class I lakes adjacent to the unit which require a 100' no cut buffer a 400' selective harvest buffer. There are also two Class I streams: One along the northeast boundary and one bisecting the unit; that each require a 100' buffer. | | | |
| Soils/Geology | Field Review: J. Metzler, 8/07/93 | Office Review: A. Wolfson | |
| No special concerns. | | | |
| Wildlife | Field Review: M. Minnillo, 8/07/93 | Office Review: M. Hall | |
| Low to moderate deer use in unit. Angel Lake east of unit. Geese observed at lakes east and west of unit. Common loons observed on Angel Lakes. Lakes east and west are active beaver ponds. Contiguous old-growth. Retain Level 1 structure; lake and stream buffers will help retain structure. Snags will also be left in Class I stream buffer and lake buffers/select harvest buffers. Avoid disturbance of wintering trumpeter swans by avoiding all human activity within 0.5 mile of known swan wintering areas during October 15 through March 15. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit is not visible from any priority travel routes or use areas. Maximum Modification VQO. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Streams on southwest and northeast of and bisecting unit require 100' TTRA buffer. Lakes require 100' no-cut and 400' selective cut buffers (Type I). Stream on northwest boundary (Class III) requires directional falling into unit. Make this stream the northwest boundary. Type B clearcut in remainder of unit. Mitigation measures for this unit are: F5, F6, F8, F10, and W4. | | | |

NO UNIT MAP
UNIT DROPPED OR DEFERRED

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

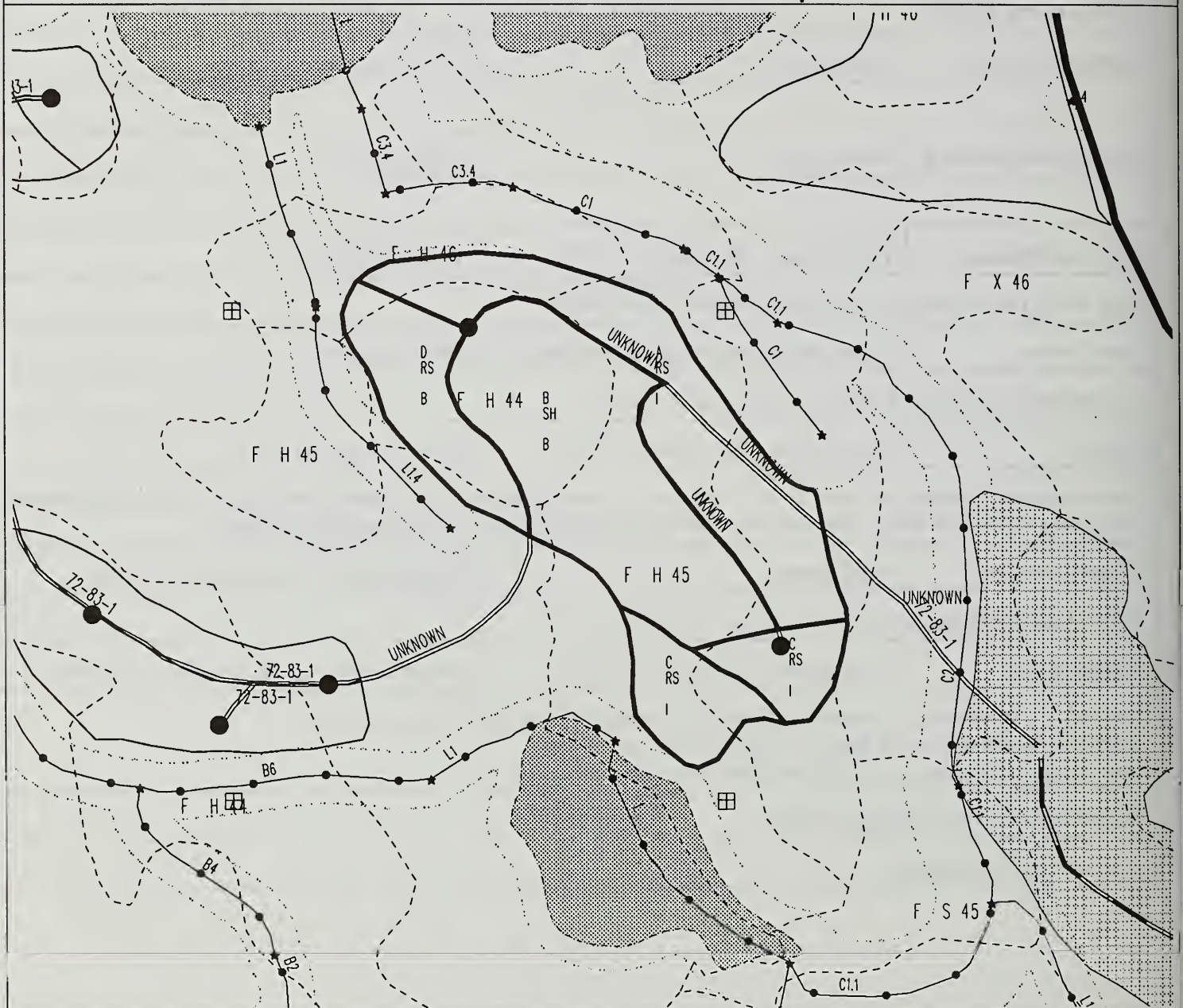
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|--|------------------------------------|--|-------------------------|
| VCU #: 597 | UNIT #: 436 | QUARTER QUAD: C3NW | PHOTO YR/#: 1991/690-33 |
| ACRES: | VOL.: | LOGGING SYSTEM: | |
| LANDSCAPE ZONE: | | | |
| Timber/Vegetation | Field Review: | Office Review: | |
| | | | |
| Logging/Transportation | Field Review: | Office Review: | |
| | | | |
| Watershed/Fisheries | Field Review: B. Romey, 6/26/93 | Office Review: | |
| Lake needs 100' no cut buffer plus 400' selective harvest buffer. | | | |
| Soils/Geology | Field Review: M. Minnillo, 6/26/93 | Office Review: | |
| Predominantly dry site with low slopes. No major concerns. | | | |
| Wildlife | Field Review: M. Minnillo, 6/26/93 | Office Review: M. Hall | |
| Lake along west boundary of unit. Structure retained in required buffers. Recommend dropping unit due to high thermal cover and proximity to lake. Snags will be retained within lake buffer. Level 1 structure retention. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit not seen from any priority travel route or use area. | | | |
| Cultural/Lands | Field Review: D. Putnam, 7/26/93 | Office Review: T. W. Greiser, M. Greenig | |
| Cultural - Unit partially or completely within high probability area for cultural resources. Culturally Modified Tree on shore of Angel Lake to west of unit. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | Reviewed By: | |
| Unit deferred for adjacency. | | | |

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

VCU : 597.2

UNIT : 437

QUAD : C2-NW



- Revised Control Lake Project Boundary
- Post-Field Unit Boundary w/ Setting Codes
- Other Post-Field Unit Boundaries
- USFS Timber Types for Volc 4-7
- Eagle Tree Buffer of 330ft
- Existing & Rebuilt Roads
- F.S. Roads Under Construction
- Post-Field Proposed Roads
- Ahmu-Class 1 & Stream Chantypes
- Ahmu-Class 2 & Stream Chantypes
- Ahmu-Class 3 & Stream Chantypes
- Channel Type Change

- Lakes and Ponds
- Second Growth Units
- MMI 4
- McGilvery > 41
- Landings
- Stream & Lake NoCUT Buffers

May 17, 1994

.5 MILE

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

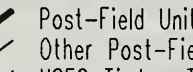
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|---|--|---|-------------------------|
| VCU #: 597 | UNIT #: 437 | QUARTER QUAD: C3NW | PHOTO YR/#: 1991/690-33 |
| ACRES: 51.1 | VOL.: 1118.5 MBF | LOGGING SYSTEM: Running Skyline/Swingyarder, Shovel | |
| LANDSCAPE ZONE: Unit is within the Angel Lake Corridor. | | | |
| Timber/Vegetation | Field Review: G. Hedin, 7/3/93 | Office Review: J. Goering | |
| Species composition predominantly hemlock with some cedar. Very few spruce in area. Predominantly hemlock regeneration. Sparse western red cedar and spruce regeneration. Light amount of mistletoe infection evident in canopy. Promote spruce/cedar regeneration through planting. Harvest all mistletoe infected hemlock and cut infected regeneration. | | | |
| Logging/Transportation | Field Review: M. Hoshall/ B. Wilkinson, 7/01/93 | Office Review: K. Jehnke | |
| Unit is accessed by Road #72-83-1. The outside perimeter should be swing yarded. The interior portion should be shovel logged. Partial cut is feasible. A 100 foot buffer is on the NW stream and SW lake. A 200 foot stream buffer is on the NE edge. | | | |
| Watershed/Fisheries | Field Review: B. Romey, 6/26/93 | Office Review: A. Wolfson | |
| Stream 1 needs a 100' buffer. Stream 2 needs a 100' buffer plus 100' no-programmed harvest buffer from floodplain/delta edge. Stream 3 needs a 100' buffer plus 100' no programmed harvest buffer. Lake needs a 100' buffer plus 400' selective harvest buffer. | | | |
| Soils/Geology | Field Review: M. Minnillo, 6/26/93 | Office Review: A. Wolfson | |
| Overall dry site and low slopes. No concerns. | | | |
| Wildlife | Field Review: M. Minnillo, 6/26/93 | Office Review: A. Wolfson | |
| North and east portion of unit is dense thermal cover with high food supply to the south and west. High use areas at the lakes north and south of unit and riparian corridor at east boundary. 100' stream buffer would adequately provide structure; Level 1 retention. Avoid disturbance of wintering trumpeter swans by avoiding all human activity within 0.5 mile of known swan wintering areas during October 15 through March 15. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit is not visible from any priority travel routes or use areas. Maximum Modification VQO. Visible from Angel Lakes which receive considerable recreational use. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Stream 1 northwest corner of unit needs a 100' buffer. Stream 2 at north end of unit requires 100' buffer plus 100' no-programmed harvest. Lake requires (to south) 100' no-cut buffer and 400' selective harvest buffer. During final layout consider putting road on south side of knob in unit to minimize visibility from lake. Group selection - Type I recommended for north facing slopes facing Angel Lakes, Type B clearcut for south facing slopes. Mitigation measures for this unit are: F4, F5, F8, F10, W2, and W4. | | | |







CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

UNIT : 438

QUAD : C2-NW



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- | | |
|--|---|
| | Revised Control Lake Project Boundary |
| | Post-Field Unit Boundary w/ Setting Codes |
| | Other Post-Field Unit Boundaries |
| | USFS Timber Types for Volc 4-7 |
| | Eagle Tree Buffer of 330ft |
| | Existing & Rebuilt Roads |
| | F.S. Roads Under Construction |
| | Post-Field Proposed Roads |
| | Ahmu-Class 1 & Stream Chantypes |
| | Ahmu-Class 2 & Stream Chantypes |
| | Ahmu-Class 3 & Stream Chantypes |

-  Lakes and Ponds
 Second Growth Units
 MMI 4
 McGilvery > 41
 Landings
 Stream & Lake NoCUT Buffers

★ Channel Type Change

.5 MILE

May 17, 1994

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

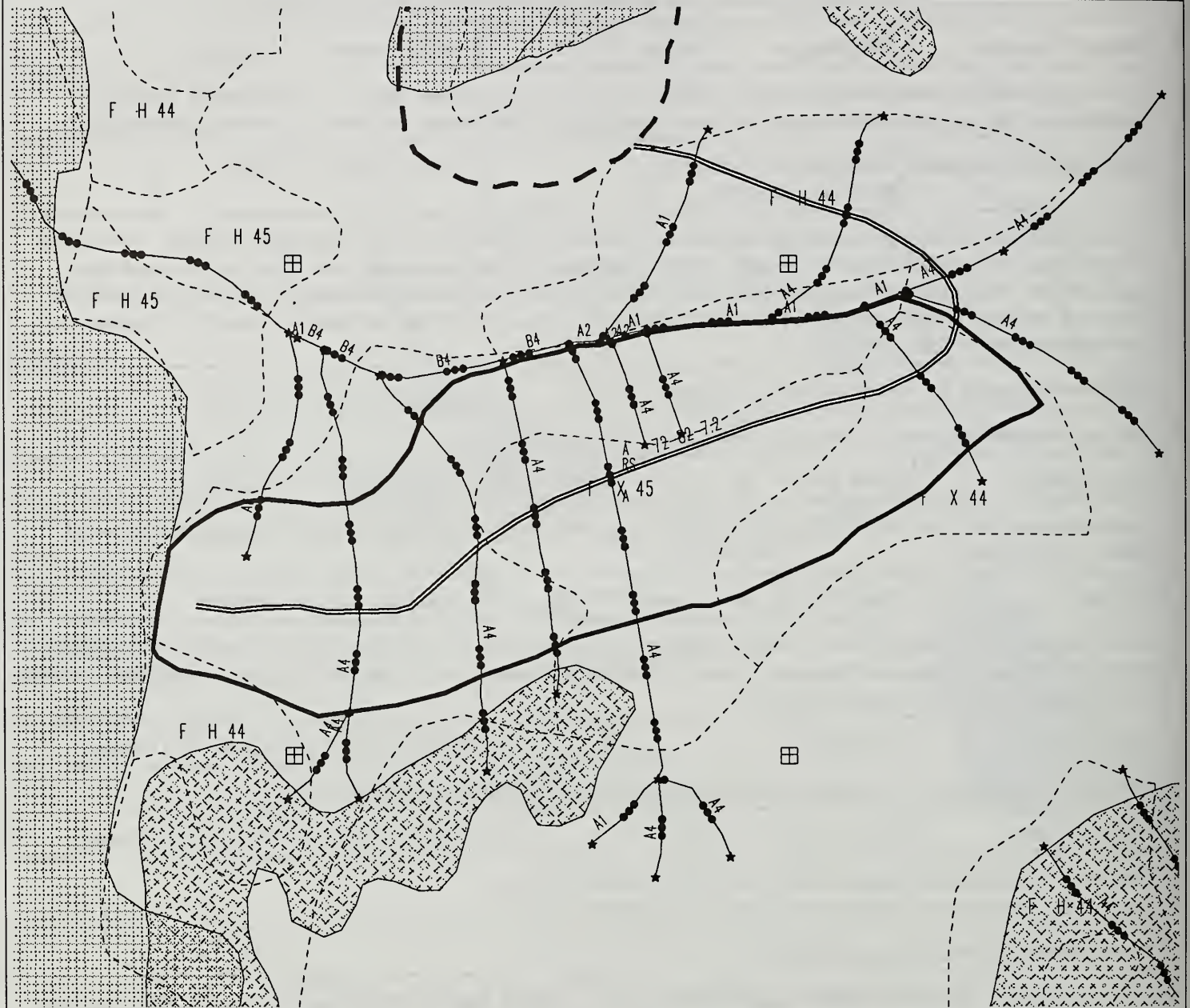
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|---|---|---|-------------------------|
| VCU #: 597 | UNIT #: 438 | QUARTER QUAD: C2NW | PHOTO YR/#: 1991/690-33 |
| ACRES: 18.1 | VOL.: 329.2 MBF | LOGGING SYSTEM: Running Skyline/Swingyarder/Shovel Yard | |
| LANDSCAPE ZONE: Unit is within Goose Creek Watershed and in the Angle Lake Corridor. | | | |
| Timber/Vegetation | Field Review: S. Karstens, 7/10/93 | Office Review: J. Goering | |
| Species composition predominantly hemlock with some cedar. Few spruce are present. Predominantly hemlock regeneration. Sparse spruce and western red cedar regeneration. Fairly dense understory vegetation including salal. | | | |
| Logging/Transportation | Field Review: T. Wetzell/ D. Foster, 8/17/93 | Office Review: M. Whitty | |
| This unit requires 30 stations of medium construction beyond Unit 597.2-437 - 240' of muskeg crossing. 75% uphill swingyarding; 25% downhill shovel logging. Potential highlead on cable portion of unit - there are no suspension requirements. Economics are marginal due to small (13 acre) unit. Unit has approximately 2,000' of 100' buffer on south and west boundaries. Scattered pockets of blowdown in center of unit still of salvagable quality. Consider feasibility of road to Unit #597-124. | | | |
| Watershed/Fisheries | Field Review: B. Romey, 7/08/93 | Office Review: A. Wolfson | |
| 100' no-cut buffer required on Streams 1 and 2 along south side of unit. | | | |
| Soils/Geology | Field Review: M. Minnillo, 7/08/93 | Office Review: A. Wolfson | |
| Low elevation; fairly flat unit. No stability concerns except along Class I stream which will be protected by no-cut buffer. No concerns. | | | |
| Wildlife | Field Review: M. Minnillo, 7/08/93 | Office Review: A. Wolfson | |
| Moderate deer use throughout unit. Muskeg along north boundary of unit. Maintain Level 1 structure retention in unit. Avoid disturbance of wintering trumpeter swans by avoiding all human activity within 0.5 mile of known swan wintering areas during October 15 through March 15. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit is not visible from any priority travel routes or use areas. Maximum modification VQO. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Type A clearcut. 100' no-cut buffer required south of unit. Channel Type B4 above junction requires 100' no-cut plus 50' selective harvest Type I buffer. Consider feasibility of road access to Unit #597-124 to avoid 60' span bridge. Mitigation measures for this unit are: F5, F8, F10, W2, and W5. | | | |

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

VCU : 597.2

UNIT : 439

QUAD : C3-NE



- Revised Control Lake Project Boundary
- Past-Field Unit Boundary w/ Setting Codes
- Other Post-Field Unit Boundaries
- USFS Timber Types for Valc 4-7
- Eagle Tree Buffer of 330ft
- Existing & Rebuilt Roads
- F.S. Roads Under Construction
- Past-Field Proposed Roads
- Ahmu-Class 1 & Stream Chantypes
- Ahmu-Class 2 & Stream Chantypes
- Ahmu-Class 3 & Stream Chantypes
- Channel Type Change

- Lakes and Ponds
- Second Growth Units
- MMI 4
- McGilvery > 41
- Landings
- Stream & Lake NoCUT Buffers

.5 MILE

August 03, 1994

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

| | | | |
|---|--|---|--------------------------|
| VCU #: 597 | UNIT #: 439 | QUARTER QUAD: C3NE | PHOTO YR/#: 1991/1090-31 |
| ACRES: 74.3 | VOL.: 2253.0 MBF | LOGGING SYSTEM: Swingyarder/Running Skyline | |
| LANDSCAPE ZONE: Unit is within Rio Beaver Watershed. | | | |
| Timber/Vegetation | Field Review: S. Karstens/ G. Hedin, 7/5/93 | Office Review: J. Goering | |
| Species composition predominantly hemlock but includes some spruce and cedar. Regeneration predominantly hemlock but includes cedar and spruce. Rocky, relatively thin soils and exposed rock. Possible salmonberry and brush incursions with soil disturbance based on existing densities. | | | |
| Logging/Transportation | Field Review: J. Estabrook/ C. Giles, 8/15/93 | Office Review: E. Urstadt | |
| The unit is accessed by Rd #72-83-7.2 which has 3,700' easy and 1,000' difficult construction. Harvest system is swing-yard with running skyline to a continuous roadside landing. Numerous steep creeks shall be protected by 70' non-merchantable buffer and recommend removing road crossings after harvest. Partial suspension is feasible. 50% is downhill and 50% is uphill logging. A partial cut is a good option; but will be very difficult for downhill yarding (if not impossible). Blowdown should not be a problem. The economics are good. | | | |
| Watershed/Fisheries | Field Review: J. Metzler/ A. Ablow, 6/28/93 | Office Review: T. Stewart | |
| Eight streams in unit - all non-fish bearing and most originating in snow avalanche chutes. These feed into a fish bearing stream approximately 1/2 mile below the unit. Split yard and retain non-merchantable trees within 70' to reduce risk of widening avalanches. | | | |
| Soils/Geology | Field Review: J. Metzler, 6/28/93 | Office Review: T. Stewart | |
| Above 1,700' there are numerous broken rock bluffs, 20' to 40' high and shallow soils as well as harsh regeneration conditions. Keep top line below this elevation. No slope instability noted below 1,700'. | | | |
| Wildlife | Field Review: J. Metzler, 8/14/93 | Office Review: M. Hall | |
| Wolf, bear, and deer use in unit; one bear observed. No special concerns. Retain Level 3 structure. Retention of nonmerchantable trees along the eight Class III streams (soils concerns) will help maintain structure and provide a corridor through the unit. Unit adjacent to very large HCC to west. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit is not visible from any priority travel routes or use areas. Maximum Modification VQO. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Type A clearcut. Leave unmerchantable trees within 70' on Streams 1, 3, 6, 7, 8, and 9. Split yard all Class III streams. Achieve maximum suspension to minimize soil disturbance and to minimize salmonberry competition. Mitigation measures for this unit are: F1, F3, F6, F8, and W5. | | | |

NO UNIT MAP
UNIT DROPPED OR DEFERRED

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

| | | | |
|---|-----------------------------------|---|-------------------|
| VCU #: 597 | UNIT #: 440 | QUARTER QUAD: | PHOTO YR/#: 1991/ |
| ACRES: | VOL.: | LOGGING SYSTEM: | |
| LANDSCAPE ZONE: | | | |
| Timber/Vegetation | Field Review: | Office Review: | |
| | | | |
| Logging/Transportation | Field Review: | Office Review: | |
| | | | |
| Watershed/Fisheries | Field Review: E. Ablow, 6/26/93 | Office Review: | |
| There are three Class III high gradient streams that run through the unit. | | | |
| Soils/Geology | Field Review: J. Metzler, 6/26/93 | Office Review: | |
| This unit has been dropped from the timber harvest base because of MMI4 soils. There are several slumps over glacial till at the change in slope from steep to moderate gradients. There is subsurface flows emerging over compact till. There are two recent slumps and several slides in adjacent clearcut. | | | |
| Wildlife | Field Review: J. Metzler, 6/26/93 | Office Review: | |
| Low to moderate deer use. No special concerns noted. Level 3 structure retention due to adjacency to large HCC west of unit. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit not seen from any priority travel route or use area. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Dropped. | | | |

NO UNIT MAP
UNIT DROPPED OR DEFERRED

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

| | | | |
|---|-----------------------------------|---|-------------------|
| VCU #: 597 | UNIT #: 441 | QUARTER QUAD: | PHOTO YR/#: 1991/ |
| ACRES: | VOL.: | LOGGING SYSTEM: | |
| LANDSCAPE ZONE: | | | |
| Timber/Vegetation | Field Review: | Office Review: | |
| | | | |
| Logging/Transportation | Field Review: | Office Review: | |
| | | | |
| Watershed/Fisheries | Field Review: E. Ablow, 6/25/93 | Office Review: | |
| <p>There are 10 to 12 Class III, A4 and A1, streams throughout the unit. These streams are highly active. Lots of sediment is moving downstream, converging onto a Class II stream that goes into a Class I stream. Any logging could create further, more severe activity that could directly disturb downstream fish habitat.</p> | | | |
| Soils/Geology | Field Review: J. Metzler, 6/25/93 | Office Review: | |
| <p>This is a very wet glaciated valley. Numerous streams and seeps drain from sloping muskegs and converge in this area. Very active MMI4 soils. Should be dropped from the timber base because of the high instability.</p> | | | |
| Wildlife | Field Review: J. Metzler, 6/25/93 | Office Review: | |
| | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit not seen from any priority travel route or use area. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| <p>Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit.</p> | | | |
| Interdisciplinary Team Recommendations | | | |
| Dropped. | | | |

NO UNIT MAP

UNIT DROPPED OR DEFERRED

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

| | | | |
|---|-----------------------------------|---|--------------------------|
| VCU #: 597 | UNIT #: 442 | QUARTER QUAD: | PHOTO YR/#: 1991/1090-31 |
| ACRES: | VOL.: | LOGGING SYSTEM: | |
| LANDSCAPE ZONE: | | | |
| Timber/Vegetation | Field Review: | Office Review: | |
| | | | |
| Logging/Transportation | Field Review: | Office Review: | |
| | | | |
| Watershed/Fisheries | Field Review: E. Ablow, 6/25/93 | Office Review: | |
| <p>There are four streams in this unit. The first stream is a Class III stream that requires harvest only to the slope break and directional fall away from the stream. It also should be the eastern boundary from the topographical break. Stream 2 is a Class II stream that requires a 100' buffer and forms the southern boundary. The two other streams in the unit require split yarding and directional fall away from the streams.</p> | | | |
| Soils/Geology | Field Review: J. Metzler, 6/25/93 | Office Review: M. Hall | |
| <p>Area above 1,200' elevation has been removed from the suitable timber base due to very high MMI soils. Remainder of unit is stable no special concerns-moderate slopes. Retain Level 1 structure.</p> | | | |
| Wildlife | Field Review: J. Metzler, 6/25/93 | Office Review: | |
| | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit not seen from any priority travel route or use area. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| <p>Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit.</p> | | | |
| Interdisciplinary Team Recommendations | | | |
| Deferred due to small area of CFL along road system at top of unit. | | | |

NO UNIT MAP

UNIT DROPPED OR DEFERRED

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

| | | | |
|--|-----------------------------------|---|-------------------------|
| VCU #: 597 | UNIT #: 443 | QUARTER QUAD: | PHOTO YR/#: 1991/690-30 |
| ACRES: | VOL.: | LOGGING SYSTEM: | |
| LANDSCAPE ZONE: | | | |
| Timber/Vegetation | Field Review: | Office Review: | |
| | | | |
| Logging/Transportation | Field Review: | Office Review: | |
| | | | |
| Watershed/Fisheries | Field Review: R. Rogers, 6/26/93 | Office Review: | |
| Stream 1 needs 100' no cut buffer on Class I stream and 100' no program harvest buffer on C1 channel type. Stream 2 - WQ stream feeding Stream 1; direction fall away from stream and split yard. | | | |
| Soils/Geology | Field Review: R. Rogers, 6/26/93 | Office Review: | |
| No instability noted. Tills present; recommend minimizing road cuts and cut angles to reduce soil erosion. | | | |
| Wildlife | Field Review: S. Tanguay, 6/26/93 | Office Review: M. Hall | |
| Low wildlife use noted. Wolf kill identified. No special concerns. Level 2 structure retention due to six HCC's in proximity. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit not seen from any priority travel route or use area. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Unit deferred due to adjacency to clearcut to the west. | | | |

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

VCU : 597.2

UNIT : 445

QUAD : C2-NW



- Revised Control Lake Project Boundary
- Post-Field Unit Boundary w/ Setting Codes
- Other Post-Field Unit Boundaries
- USFS Timber Types for Volc 4-7
- Eagle Tree Buffer of 330ft
- Existing & Rebuilt Roads
- F.S. Roads Under Construction
- Post-Field Proposed Roads
- Ahmu-Class 1 & Stream Chantypes
- Ahmu-Class 2 & Stream Chantypes
- Ahmu-Class 3 & Stream Chantypes
- Channel Type Change

- Lakes and Ponds
- Second Growth Units
- MMI 4
- McGilvery > 41
- Landings
- Stream & Lake NoCUT Buffers

May 17, 1994

.5 MILE

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

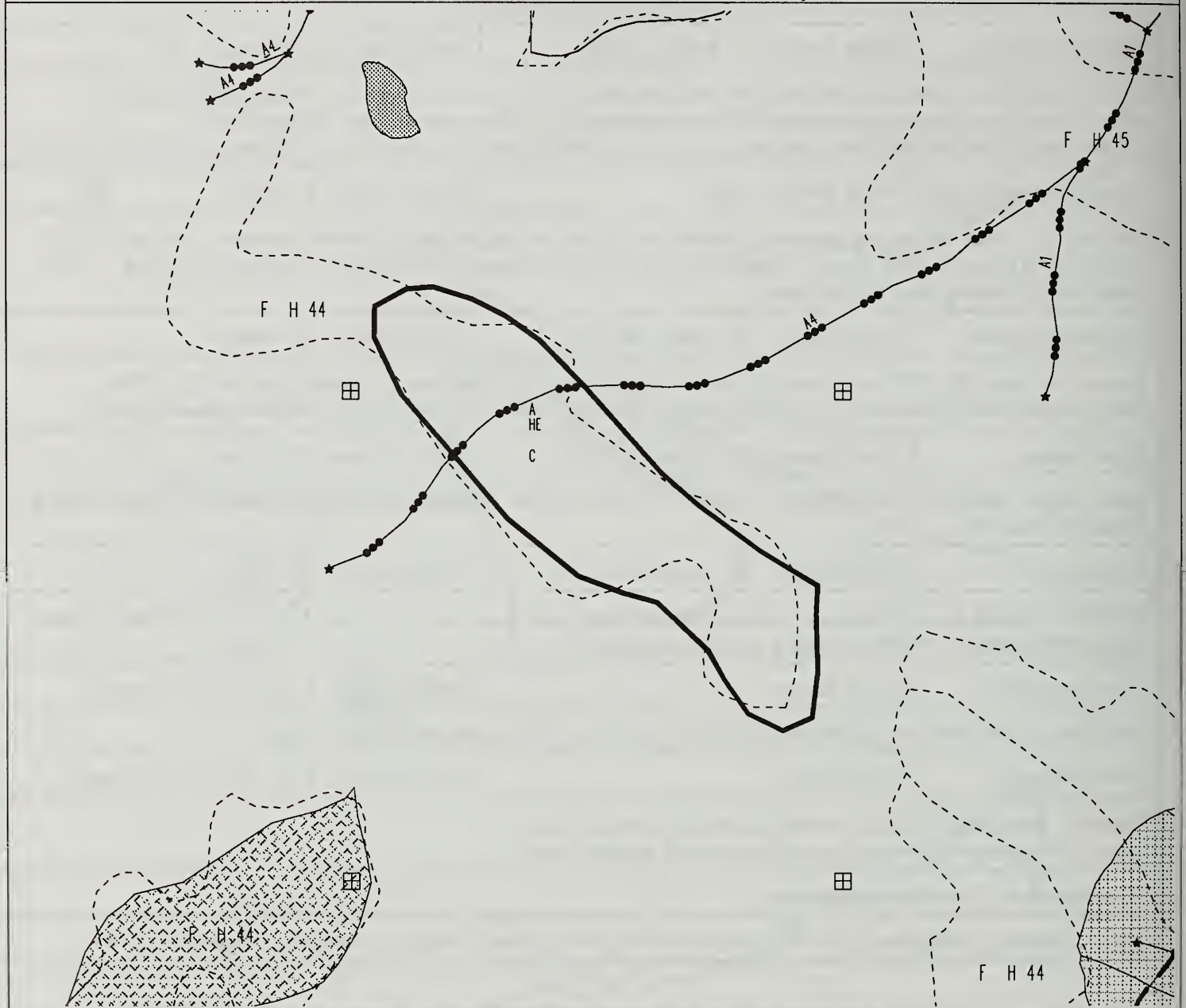
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|---|------------------------------------|---|-------------------------|
| VCU #: 597 | UNIT #: 445 | QUARTER QUAD: C2NW | PHOTO YR/#: 1991/690-30 |
| ACRES: 18.2 | VOL.: 439.9 MBF | LOGGING SYSTEM: Helicopter | |
| LANDSCAPE ZONE: Unit is within Rio Beaver/Goose Creek Watershed | | | |
| Timber/Vegetation | Field Review: T. Stecher, 7/9/93 | Office Review: J. Goering | |
| Species composition predominantly hemlock with some cedar. Few spruce are present. Predominantly hemlock regeneration. Sparse spruce and western red cedar regeneration. Alaska yellow cedar decline evident. Steep relatively shallow soils, and poor soil drainage areas within unit. Rock bluffs on the higher elevations of the unit. | | | |
| Logging/Transportation | Field Review: None | Office Review: K. Jehnke | |
| Unit was not visited by logging engineers. Recommend helicopter logging due to isolated position. Yard to 597-118. Unit 597-118 is not on 1991 photos. Approximate average flight distance = 3200 feet. Average flight slope = -18%. Check size of landing prior to final layout. | | | |
| Watershed/Fisheries | Field Review: B. Romey, 7/07/93 | Office Review: T. Stewart | |
| Stream 1 is Class III - O/W, directional fall away from stream from slope break. Stream 2 is Class III - O/W, directional fall away form stream from slope break. (Streams 1 and 2 are same stream, different channel types). | | | |
| Soils/Geology | Field Review: M. Minnillo, 7/07/93 | Office Review: T. Stewart | |
| Steep slopes. Rock bluff through center of unit at 1,200' elevation. Planned and recommended for helicopter logging. Generally a wet site. | | | |
| Wildlife | Field Review: M. Minnillo, 7/07/93 | Office Review: M. Hall | |
| Helicopter logging per soils/geology recommendation would retain some cover and provide for future structure in stand. No wildlife concerns. Maintain Level 1 structure retention. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit is not visible from any priority travel routes or use areas. Maximum Modification VQO. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Type C clearcut. Directionally fall trees away from stream below unit. Mitigation measures include F6 and W3. | | | |

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

VCU : 597.2

UNIT : 446

QUAD : C2-NW



- Revised Control Lake Project Boundary
- Past-Field Unit Boundary w/ Setting Codes
- Other Past-Field Unit Boundaries
- USFS Timber Types for Volc 4-7
- Eagle Tree Buffer at 330ft
- Existing & Rebuilt Roads
- F.S. Roads Under Construction
- Past-Field Proposed Roads
- Ahmu-Class 1 & Stream Chantypes
- Ahmu-Class 2 & Stream Chantypes
- Ahmu-Class 3 & Stream Chantypes
- Channel Type Change

- Lakes and Ponds
- Second Growth Units
- MMI 4
- McGilvery > 41
- Landings
- Stream & Lake NaCUT Buffers

May 17, 1994

0.5 MILE

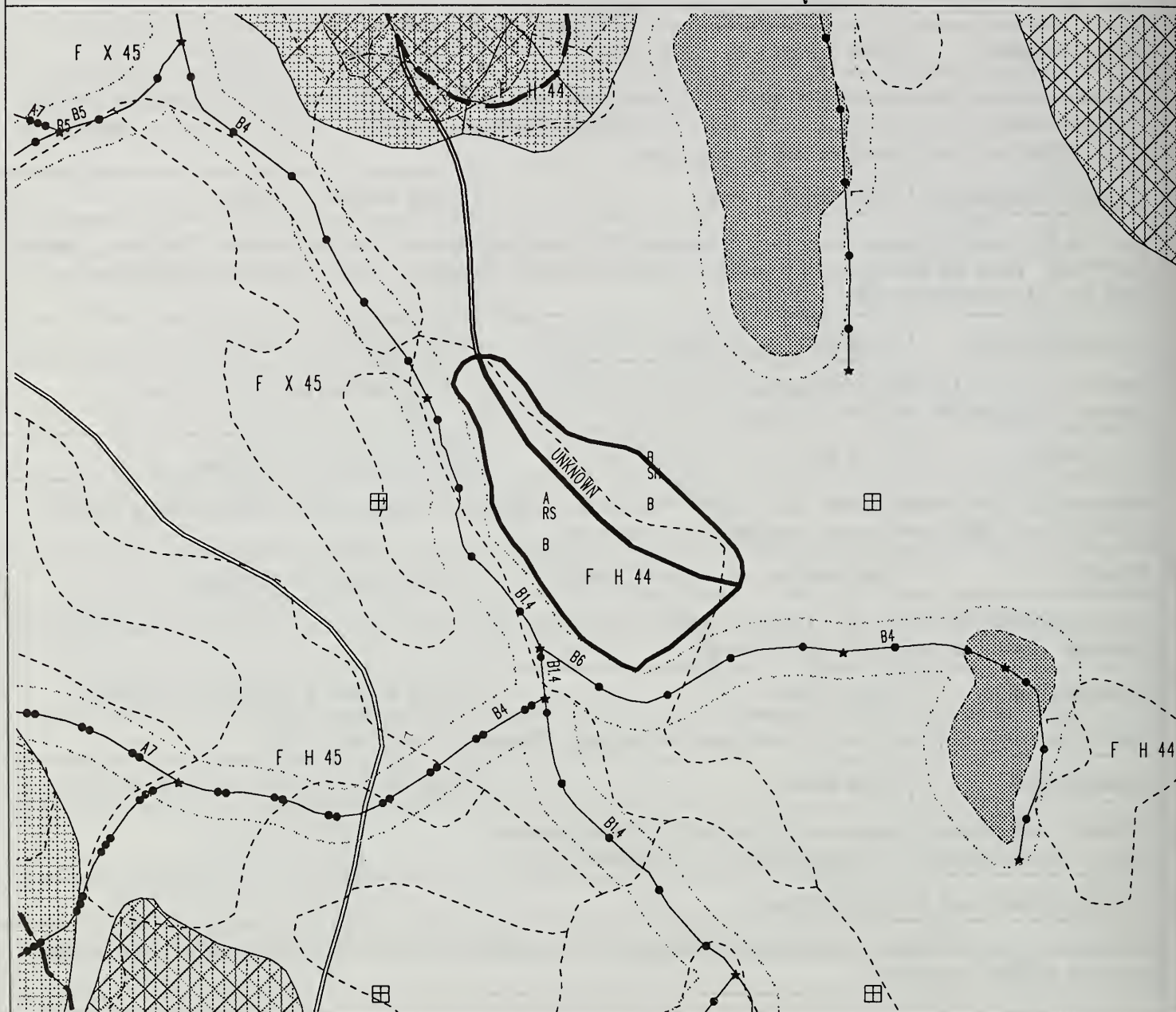
CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD













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|---|------------------------------------|---|-------------------------|
| VCU #: 597 | UNIT #: 446 | QUARTER QUAD: C2NE | PHOTO YR/#: 1991/690-30 |
| ACRES: 26.7 | VOL.: 448.7 MBF | LOGGING SYSTEM: Helicopter | |
| LANDSCAPE ZONE: Unit is within Rio Beaver Watershed. | | | |
| Timber/Vegetation | Field Review: G. Hedin, 7/9/93 | Office Review: J. Goering | |
| Species composition predominantly hemlock but includes cedar and some spruce. Regeneration predominantly hemlock but includes some cedar and spruce. Rock bluffs on the higher elevations of the unit. Steep slopes, rocky, relatively thin soils, exposed rock, and some poor soil drainage areas. | | | |
| Logging/Transportation | Field Review: none | Office Review: K. Jehnke | |
| Unit was not visited by logging engineers. Recommend helicopter logging due to isolated location. Yard logs to landing in 597-118. Road and landing do exist but exact size and location is unknown. Approximate average flight distance = 3800 feet. Average flight slope = -26%. | | | |
| Watershed/Fisheries | Field Review: B. Romey, 7/07/93 | Office Review: A. Wolfson | |
| Stream 2 is a Class III with O/W flagging - split yard or full suspension, directional fall away from stream. Stream 1 is a Class III with G/W (no longer near unit). | | | |
| Soils/Geology | Field Review: M. Minnillo, 7/07/93 | Office Review: A. Wolfson | |
| Slopes are \geq 70% throughout unit, up to 105%. Wet site with many open patches of deer cabbage bedrock through middle of unit. Helicopter logging planned and recommended. | | | |
| Wildlife | Field Review: M. Minnillo, 7/07/93 | Office Review: A. Wolfson | |
| Low to moderate deer use in unit. Helicopter selective logging for soils/geology concerns would leave cover and provide structure. Level 3 structure retention maintained. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit is not visible from any priority travel routes or use areas. Maximum Modification VQO. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Recommend Type C clearcut (maintain Level 3 structure). Directionally fall trees away from stream in unit. Mitigation measures include F6 and W3. | | | |







CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

UNIT : 447

QUAD : C2-NW



-  Revised Control Lake Project Boundary
-  Post-Field Unit Boundary w/ Setting Codes
-  Other Post-Field Unit Boundaries
-  USFS Timber Types for Volc 4-7
-  Eagle Tree Buffer of 330ft
-  Existing & Rebuilt Roads
-  F.S. Roads Under Construction
-  Post-Field Proposed Roads
-  Ahmu-Class 1 & Stream Chantypes
-  Ahmu-Class 2 & Stream Chantypes
-  Ahmu-Class 3 & Stream Chantypes
-  Channel Type Change

-  Lakes and Ponds
 Second Growth Units
 MMI 4
 McGilvery > 41
 Landings
 Stream & Lake NoCUT Buffers

May 17, 1994

.5 MILE

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

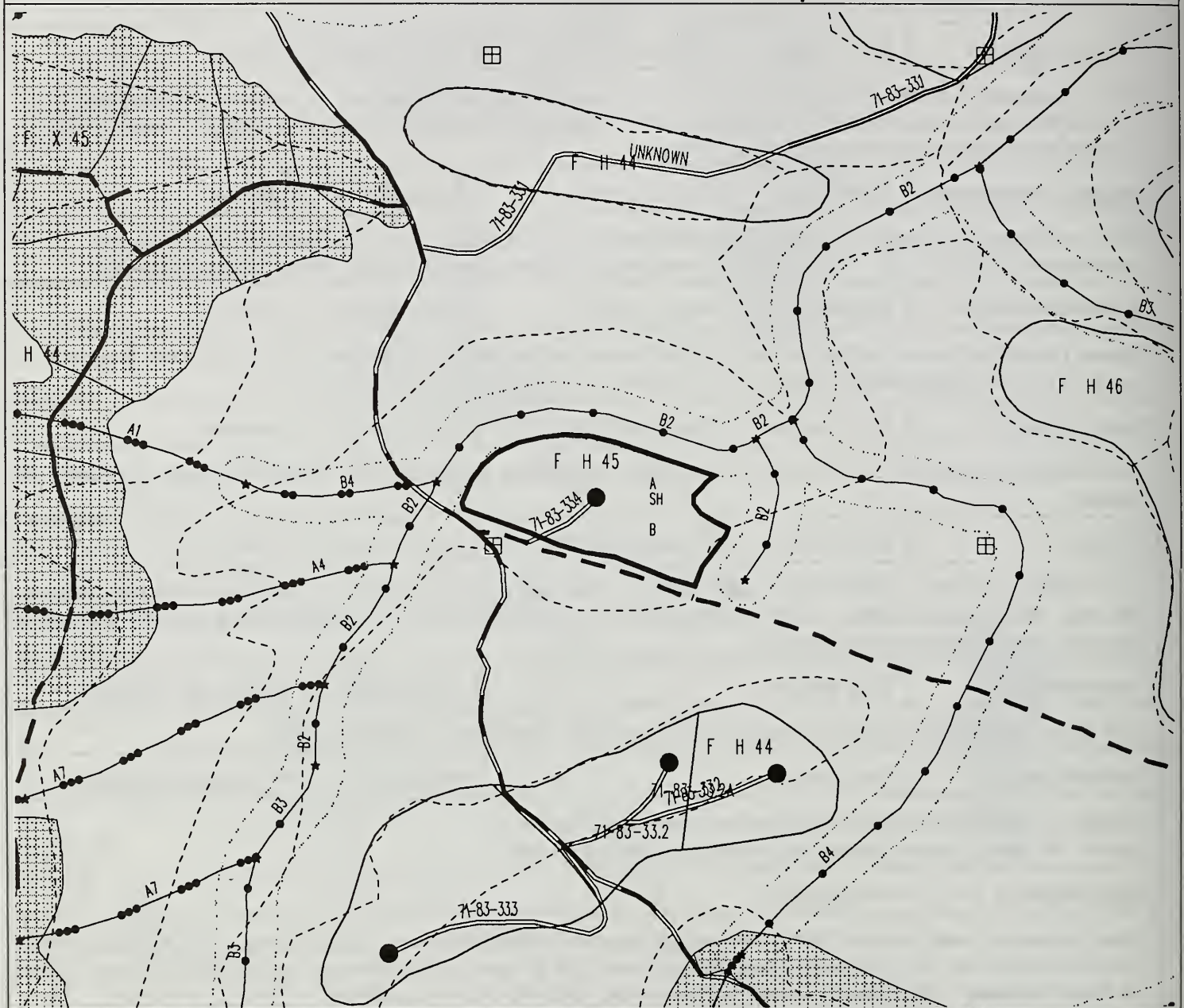
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|--|-----------------------------------|---|-------------------------|
| VCU #: 597 | UNIT #: 447 | QUARTER QUAD: C2NW | PHOTO YR/#: 1991/690-30 |
| ACRES: 16.4 | VOL.: 370.2 MBF | LOGGING SYSTEM: Running Skyline, Shovel | |
| LANDSCAPE ZONE: Unit is within Goose Creek Watershed. | | | |
| Timber/Vegetation | Field Review: T. Stecher, 7/3/93 | Office Review: J. Goering | |
| Species composition predominantly hemlock with some cedar. Few spruce are present. Regeneration predominantly hemlock and includes some cedar but is lacking spruce. Light amount of mistletoe infection evident in canopy. Promote spruce/cedar regeneration through planting. | | | |
| Logging/Transportation | Field Review: E. Urstadt, 8/15/93 | Office Review: T. Stewart | |
| Unit can be harvested using swingyarding with continuous road side landing. Unit is accessed by 2,600' of easy construction (Rd #72-83-12). Elevations above road may be shovel logged if desired. Partial cutting is feasible. | | | |
| Watershed/Fisheries | Field Review: R. Rogers, 6/26/93 | Office Review: T. Stewart | |
| Stream 1 needs 100' no-cut buffer and 100' selective harvest buffer; blue/white flagging along flood plain. Stream 2 needs 100' no-cut buffer and 50' selective harvest buffer; blue/white flagging in stream. | | | |
| Soils/Geology | Field Review: R. Rogers, 6/26/93 | Office Review: T. Stewart | |
| No instability noted on slopes. Glacial till soils present, may require minimizing road cuts and cut angles to prevent soil erosion. | | | |
| Wildlife | Field Review: S. Tanguay, 6/26/93 | Office Review: M. Hall | |
| Low wildlife use in unit. Moderate deer sign observed. This area is highly fragmented. This unit will further fragment this area. Woodpeckers audible. Avoid muskegs both east of unit and along Class I mainstream floodplain. Close roads following entry. Retain Level 1 structure. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit is not visible from any priority travel routes or use areas. Maximum Modification VQO. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Class I stream on south requires 100' no-cut and additional 50' selective harvest. Class I stream on west requires 100' no-cut and additional 100' selective harvest. Recommend Type B clearcut (incorporating Type I selective harvest buffers on Class I streams). Mitigation measures for this unit are: F5, F8, F10, W2, and W4. | | | |

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

VCU : 597.2

UNIT : 448

QUAD : C3-NE



- Revised Control Lake Project Boundary
- Post-Field Unit Boundary w/ Setting Codes
- Other Post-Field Unit Boundaries
- USFS Timber Types for Volc 4-7
- Eagle Tree Buffer of 330ft
- Existing & Rebuilt Roads
- F.S. Roads Under Construction
- Post-Field Proposed Roads
- Ahmu-Class 1 & Stream Chantypes
- Ahmu-Class 2 & Stream Chantypes
- Ahmu-Class 3 & Stream Chantypes
- Channel Type Change

- Lakes and Ponds
- Second Growth Units
- MMI 4
- McGilvery > 41
- Landings
- Stream & Lake NoCUT Buffers

.5 MILE

May 17, 1994

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

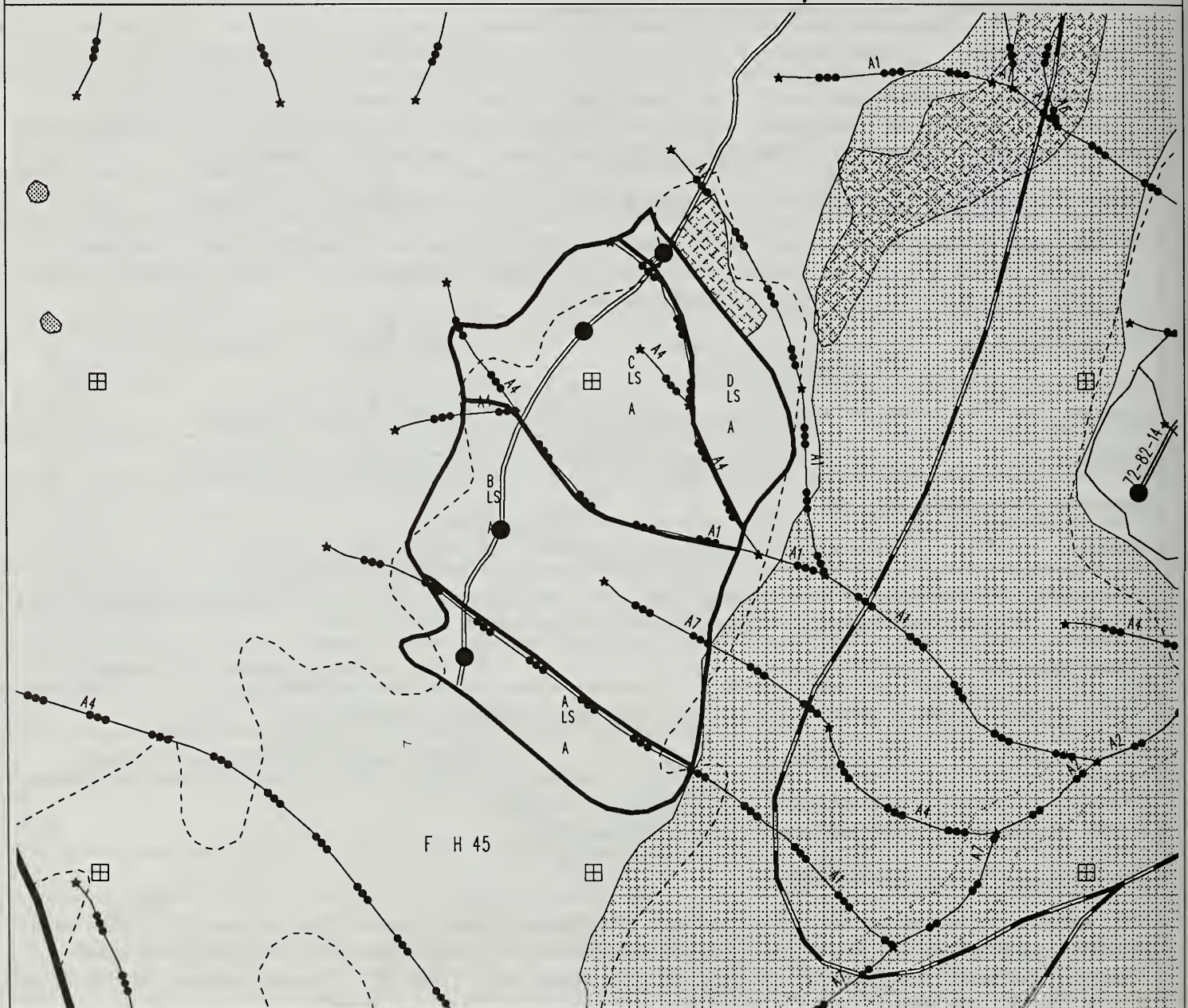
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|--|---|---|--------------------------|
| VCU #: 597 | UNIT #: 448 | QUARTER QUAD: C3NE | PHOTO YR/#: 1991/990-163 |
| ACRES: 9.3 | VOL.: 218.9 MBF | LOGGING SYSTEM: Shovel | |
| LANDSCAPE ZONE: Unit is within the Rio Beaver Watershed | | | |
| Timber/Vegetation | Field Review: B. Hasebe, 6/17/93 | Office Review: J. Goering | |
| Species composition predominantly hemlock with some cedar. Few spruce are present. Predominantly hemlock regeneration. Sparse spruce regeneration. Fairly dense understory vegetation including abundant salal. Light amount of mistletoe infection evident in canopy. Numerous muskegs are located around the unit. Shallow soils. | | | |
| Logging/Transportation | Field Review: E. Urstadt, 8/15/93 | Office Review: A. Wolfson | |
| Harvest system is shovel logged to road. Unit is accessed by Rd #71-83-33.4 which has 400' of easy construction. A wet, muskeg portion in the northeast corner should be left for wildlife. Blowdown should not be a problem. Partial cut is possible, but not recommended. Unit is economically feasible. | | | |
| Watershed/Fisheries | Field Review: B. Romey/ M. Minnillo, 6/10/93 | Office Review: A. Wolfson | |
| Required 100' TTRA buffer on Class I, Stream 1. Required 100' TTRA buffer on Class I, Stream 2. | | | |
| Soils/Geology | Field Review: M. Minnillo, 6/10/93 | Office Review: A. Wolfson | |
| Low slopes. No stability concerns. | | | |
| Wildlife | Field Review: M. Minnillo, 6/10/93 | Office Review: M. Hall | |
| No concerns, snag retention will be achieved in Class I and Class II stream buffers. Low wildlife signs. Retain Level 1 structure. Boundary modification on northeast unit will serve as wildlife buffer. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit is not visible from any priority travel routes or use areas. Maximum modification VQO. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| 100' buffers on Class I stream on north and east side. Recommend Type B clearcut. Fall trees away from wetter sites to minimize soil disturbance by shovel yarder. Wet muskeg area to east of landing was left as a wildlife leave island because of inadequate slash to use for a mat to support the shovel yarder (Type D). Mitigation measures for this unit are: F4, F5, F8, W1, and W4. | | | |

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

VCU : 597.2

UNIT : 449

QUAD : C3-NE



- Revised Control Lake Project Boundary
- Post-Field Unit Boundary w/ Setting Codes
- Other Post-Field Unit Boundaries
- USFS Timber Types for Volc 4-7
- Eagle Tree Buffer of 330ft
- Existing & Rebuilt Roads
- F.S. Roads Under Construction
- Post-Field Proposed Roads
- Ahmu-Class 1 & Stream Chantypes
- Ahmu-Class 2 & Stream Chantypes
- Ahmu-Class 3 & Stream Chantypes
- Channel Type Change

- Lakes and Ponds
- Second Growth Units
- MMI 4
- McGilvery > 41
- Landings
- Stream & Lake NoCUT Buffers

May 17, 1994

.5 MILE



















CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

| | | | |
|---|--|--|---------------------------|
| VCU #: 597 | UNIT #: 449 | QUARTER QUAD: C3NE | PHOTO YR/#: 1991/1090-181 |
| ACRES: 55.6 | VOL.: 1770.0 MBF | LOGGING SYSTEM: Live Skyline with 100' Tower | |
| LANDSCAPE ZONE: Unit is within Rio Beaver Watershed. | | | |
| Timber/Vegetation | Field Review: T. Stecher, 7/6/93 | Office Review: J. Goering | |
| Species composition predominantly hemlock but includes some spruce and cedar. Regeneration mostly on nurse logs and consists of hemlock and a few spruce. Lacking western red cedar regeneration. Low to moderate amounts of stem decay evident in hemlock and cedar. Deep V-notches and some poor soil drainage areas present. Promote spruce regeneration through planting or seed tree harvest. | | | |
| Logging/Transportation | Field Review: E. DeWilde/ J. Spolar, 7/05/93 | Office Review: E. Urstadt | |
| Unit is accessed by Road #72-82-14.1. Recommend a 100 foot tower using a shotgun system. Partial suspension is possible. Partial cut is not feasible due to steep slopes. Evaluate blowdown concerns during final layout. Soils within V-notches are unstable. Stream specialist suggests to leave windfirm trees near creeks. Good economics. | | | |
| Watershed/Fisheries | Field Review: J. Metzler/ S. Tanguay, 6/30/93 | Office Review: T. Stewart | |
| Six Class III streams within and adjacent to unit. Sloughing of inner gorge is occurring in Streams 1, 3, and 4; the others have the potential. These deliver sediment to the upper Rio Beaver Creek. Protect by directional falling, split yarding and leaving non-merchantable trees and trees < 12" DBH within 100' of the streams to retain root stability. Windthrow is a concern. No-cut buffer is not a good idea. | | | |
| Soils/Geology | Field Review: J. Metzler, 6/30/93 | Office Review: T. Stewart | |
| Instability is associated with the shallowly to deeply incised V-notches described above. Rest of unit is > 50%. No instability observed. | | | |
| Wildlife | Field Review: S. Tanguay, 6/30/93 | Office Review: M. Hall | |
| Low wildlife sign seen. Large muskeg complex to the northwest should be buffered as much as possible by moving the boundary to the east. Maintain Level 3 structure retention due to large clearcut to east of unit - wait would reduce remnant patch by approximately 40%. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit is not visible from any priority travel routes or use areas. Maximum Modification VQO. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Do not cut trees below break in slope in V-notches, leave unmerchantable trees (where safe) for 100' outside break in slope and split yard. Recommend Type A clearcut. Trees left around V-notches will help maintain some structure. Mitigation measures for this unit are: F6, F7, F8, and W5. | | | |

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

QUAD : C3-NE



- | | | | |
|---|---|---|-----------------------------|
|  | Revised Control Lake Project Boundary |  | Lakes and Ponds |
|  | Post-Field Unit Boundary w/ Setting Codes |  | Second Growth Units |
|  | Other Post-Field Unit Boundaries |  | MMI 4 |
|  | USFS Timber Types for Volc 4-7 |  | McGilvery > 41 |
|  | Eagle Tree Buffer of 330ft |  | Landings |
|  | Existing & Rebuilt Roads |  | Stream & Lake NoCUT Buffers |
|  | F.S. Roads Under Construction | | |
|  | Post-Field Proposed Roads | | |
|  | Ahmu-Class 1 & Stream Chantypes | | |
|  | Ahmu-Class 2 & Stream Chantypes | | |
|  | Ahmu-Class 3 & Stream Chantypes | | |
|  | Channel Type Change | | |

.5 MILE

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

| | | | |
|--|------------------------------------|--|---------------------------|
| VCU #: 597 | UNIT #: 450 | QUARTER QUAD: C3NE | PHOTO YR/#: 1991/1090-186 |
| ACRES: 14.3 | VOL.: 282.8 MBF | LOGGING SYSTEM: Slackline with 70' Tower | |
| LANDSCAPE ZONE: Unit is within Rio Beaver Watershed. | | | |
| Timber/Vegetation | Field Review: J. Miller, 7/2/93 | Office Review: J. Goering | |
| Species composition predominantly hemlock but includes some spruce and cedar. Regeneration predominantly hemlock but includes a few cedar and spruce. Fairly dense understory vegetation. | | | |
| Logging/Transportation | Field Review: E. DeWilde, 7/02/93 | Office Review: K. Jehnke | |
| Unit is accessed by Road #72-82-14. USFS Road #3012280 will need 7300 feet of reconstruction and a bridge. A 70 foot tower with slackline system can split yard creeks and achieve the recommended partial suspension. Landing #2 is small. Partial cut is not practical due to steep slopes and blowdown potential. | | | |
| Watershed/Fisheries | Field Review: B. Romey, 6/24/93 | Office Review: G. McNaughton | |
| Stream 1 needs to be split yarded or full suspension crossing. Stream 2 southeast of unit - 100' no-cut buffer. Stream 3 is a Class III G/W (not flagged); use as north boundary. | | | |
| Soils/Geology | Field Review: M. Minnillo, 6/28/93 | Office Review: G. McNaughton | |
| Recommend partial suspension above 800' elevation. | | | |
| Wildlife | Field Review: M. Minnillo, 6/28/93 | Office Review: M. Hall | |
| As unit is the only uncut timber in the valley there is low to moderate deer and bear use, primarily for cover as food is available in neighboring second growth. Recommend dropping unit to leave a substantial "wildlife island" of standing, older trees among heavily harvested area. This would maintain hiding/potential denning cover for deer/bear. Retain Level 3 structure retention due to unit surrounded by large HCC (adjacent). | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit is not visible from any priority travel routes or use areas. Maximum Modification VQO. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Much greater than 100' buffer on Class I stream to southeast of unit. Directional fall and split yard Class III streams. Because of level of harvest around unit, recommend Type B and D clearcut. Modified southeast and northwest boundary serves for snag retention and Type D clearcut. Mitigation measures for this unit are: F5, F6, F8, W1, and W4. | | | |

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CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

| | | | |
|---|------------------------------------|---|---------------------------|
| VCU #: 597 | UNIT #: 452 | QUARTER QUAD: | PHOTO YR/#: 1991/1090-131 |
| ACRES: | VOL.: | LOGGING SYSTEM: | |
| LANDSCAPE ZONE: | | | |
| Timber/Vegetation | Field Review: | Office Review: | |
| | | | |
| Logging/Transportation | Field Review: | Office Review: | |
| | | | |
| Watershed/Fisheries | Field Review: B. Romey, 6/25/93 | Office Review: | |
| Streams 1 and 2 should have full suspension, and directional fall away from stream. | | | |
| Soils/Geology | Field Review: M. Minnillo, 6/25/93 | Office Review: | |
| Recommend dropping unit due to steep, unstable, wet slopes. | | | |
| Wildlife | Field Review: M. Minnillo, 6/25/93 | Office Review: M. Hall | |
| High use bear denning area, throughout unit, especially near the southern end of unit. Sapsucker cavities throughout unit; nestings audible. Level 3 structure retention due to adjacency to large HCC. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit not seen from any priority travel route or use area. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Dropped. | | | |

NO UNIT MAP
UNIT DROPPED OR DEFERRED

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

| | | | |
|--|------------------------------------|---|---------------------------|
| VCU #: 597 | UNIT #: 453 | QUARTER QUAD: C3SE | PHOTO YR/#: 1991/1090-131 |
| ACRES: | VOL.: | LOGGING SYSTEM: | |
| LANDSCAPE ZONE: | | | |
| Timber/Vegetation | Field Review: T. Stecher, 8/18/93 | Office Review: J. Goering | |
| Species composition predominantly hemlock with some spruce. Regeneration is predominantly hemlock with some sparse spruce. Regeneration is generally poor due to the amount of deeply incised streams/V-notches. Many deep V-notches present with unstable soils and dense salmonberry and devils club. Timber present on ridge areas. | | | |
| Logging/Transportation | Field Review: | Office Review: | |
| | | | |
| Watershed/Fisheries | Field Review: B. Romey, 6/25/93 | Office Review: T. Stewart | |
| V-notches, recommend dropping unit. 8V-notch streams dissect unit. | | | |
| Soils/Geology | Field Review: M. Minnillo, 6/25/93 | Office Review: T. Stewart | |
| Slopes are 80 to 100 percent. Debris chutes throughout unit. Recommend dropping unit due to unstable soils. | | | |
| Wildlife | Field Review: M. Minnillo, 6/25/93 | Office Review: | |
| | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit not seen from any priority travel route or use area. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Dropped due to MMI4. | | | |

NO UNIT MAP
UNIT DROPPED OR DEFERRED

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

| | | | |
|---|----------------------------------|---|-------------------|
| VCU #: 597 | UNIT #: 454 | QUARTER QUAD: | PHOTO YR/#: 1991/ |
| ACRES: | VOL.: | LOGGING SYSTEM: | |
| LANDSCAPE ZONE: | | | |
| Timber/Vegetation | Field Review: | Office Review: | |
| | | | |
| Logging/Transportation | Field Review: | Office Review: | |
| | | | |
| Watershed/Fisheries | Field Review: | Office Review: | |
| | | | |
| Soils/Geology | Field Review: J. Metzler 6/26/93 | Office Review: | |
| Numerous debris chutes with devil's club and salmonberry. Seasonal slides in adjacent harvested and unharvested areas. Very high MMI. | | | |
| Wildlife | Field Review: | Office Review: | |
| | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit not seen from any priority travel route or use area. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Dropped due to MMI4. | | | |

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

VCU : 597.2

UNIT : 457

QUAD : C3-NE



- Revised Control Lake Project Boundary
- Post-Field Unit Boundary w/ Setting Codes
- Other Post-Field Unit Boundaries
- USFS Timber Types for Volc 4-7
- Eagle Tree Buffer of 330ft
- Existing & Rebuilt Roads
- F.S. Roads Under Construction
- Post-Field Proposed Roads
- Ahmu-Class 1 & Stream Chantypes
- Ahmu-Class 2 & Stream Chantypes
- Ahmu-Class 3 & Stream Chantypes
- Channel Type Change

- Lakes and Ponds
- Second Growth Units
- MMI 4
- McGilvery > 41
- Landings
- Stream & Lake NoCUT Buffers

May 17, 1994

.5 MILE

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

| | | | |
|---|--|--|---------------------------|
| VCU #: 597 | UNIT #: 457 | QUARTER QUAD: C3NE | PHOTO YR/#: 1991/1090-126 |
| ACRES: 30.6 | VOL.: 1059.6 MBF | LOGGING SYSTEM: Live Skyline/Shotgun with 100' Tower | |
| LANDSCAPE ZONE: Unit is within Rio Beaver Watershed. | | | |
| Timber/Vegetation | Field Review: J. Miller, 6/18/93 | Office Review: J. Goering | |
| Species composition predominantly cedar with hemlock. Little spruce is present. Regeneration predominantly hemlock with a few spruce but is lacking cedar. Windthrow damage evident in the middle of the unit due to unstable soils. Little to no mistletoe evident in canopy. Minimize soil displacement potential through partial retention harvest. | | | |
| Logging/Transportation | Field Review: J. Estabrook/ C. Giles/D. Graves, 8/15/93 | Office Review: E. Urstadt | |
| One landing, 0+00R, will be used with a 100' tower. This big tower is needed to attain partial suspension. Full suspension is not practical unless unit is helicopter logged. 45' tail trees will be needed to achieve partial suspension. A slack pulling carriage would minimize the number of tail trees to rig. Final layout should include more profiles. Full suspension will only be accomplished by helicopter logging. Unit is accessed by Rd #71-82-25.3A. Partial cut, though not recommended, could be achieved by helicopter logging also. Blowdown is not a problem. A wildlife buffer was left at the north boundary adjacent to muskeg. The economics are good. | | | |
| Watershed/Fisheries | Field Review: R. Rogers, 6/17/93 | Office Review: A. Wolfson | |
| East/northeast bounding stream flagged orange/white - directional fall away from stream. No other concerns. | | | |
| Soils/Geology | Field Review: R. Rogers, 6/17/93 | Office Review: A. Wolfson | |
| Significant soil creep, jackstrawed trees, and wet soils observed - partial suspension required. | | | |
| Wildlife | Field Review: J. Boyce, 6/17/93 | Office Review: M. Hall | |
| No special wildlife concerns. Low to moderate deer use in unit. Retain Level 2 structure. A buffer was left along muskeg at north end of unit. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit is not visible from any priority travel routes or use areas. Maximum Modification VQO. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Because of level of harvest in watershed and natural fragmentation from muskegs, recommend Type B clearcut. Recommend partial suspension on unit. Additional profiles will be required during final layout to ensure partial suspension is feasible. Directional fall trees away from streams on boundary. Mitigation measures for this unit are: F3, F6, F8, and W4. | | | |

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

VCU : 597.2

UNIT : 458

QUAD : C3-NE



- Revised Control Lake Project Boundary
- Post-Field Unit Boundary w/ Setting Codes
- Other Post-Field Unit Boundaries
- USFS Timber Types for Volc 4-7
- Eagle Tree Buffer of 330ft
- Existing & Rebuilt Roads
- F.S. Roads Under Construction
- Post-Field Proposed Roads
- Ahmu-Class 1 & Stream Chantypes
- Ahmu-Class 2 & Stream Chantypes
- Ahmu-Class 3 & Stream Chantypes
- Channel Type Change

- Lakes and Ponds
- Second Growth Units
- MMI 4
- McGilvery > 41
- Landings
- Stream & Lake NoCUT Buffers

May 17, 1994

0.5 MILE

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

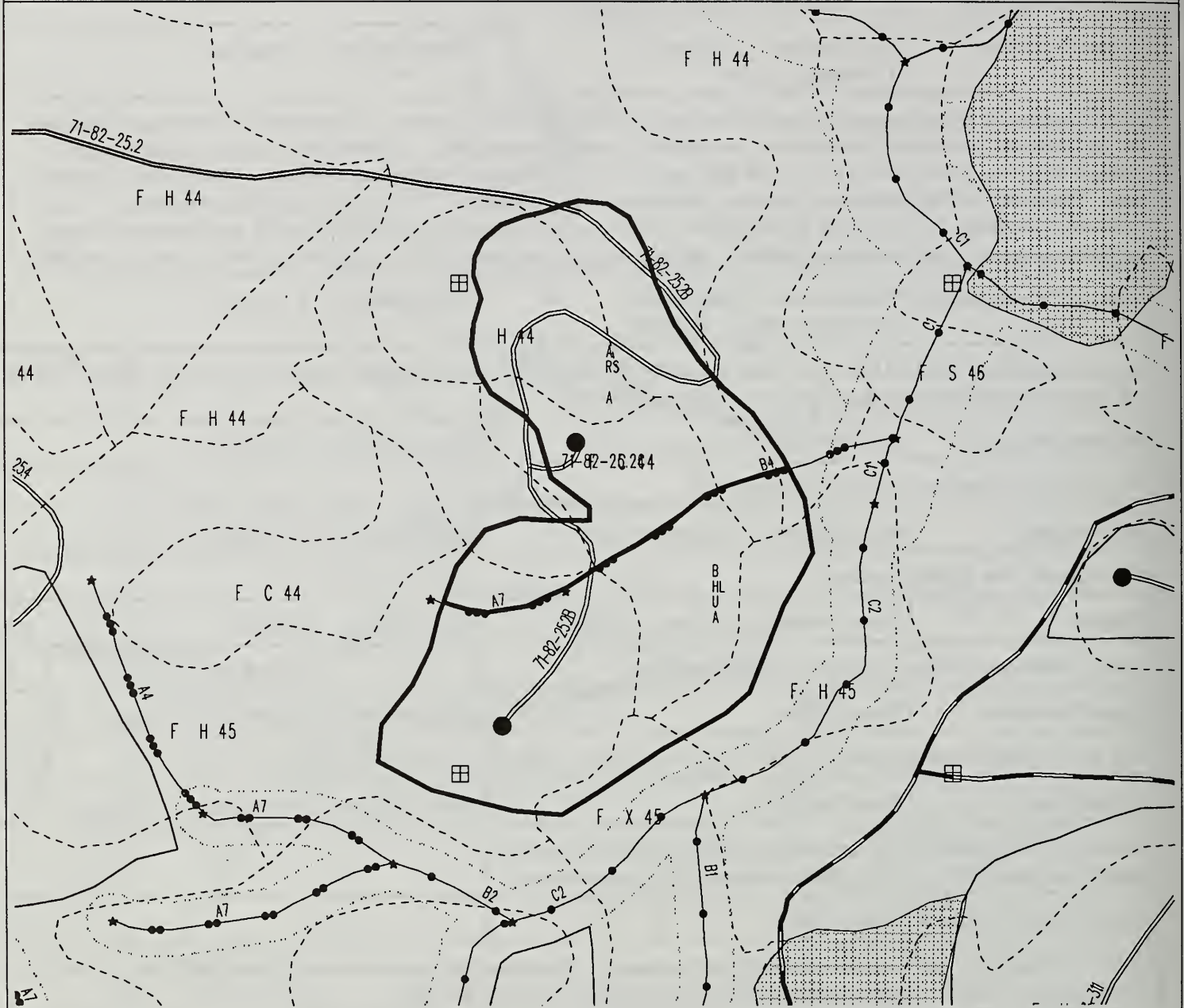
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|--|---|---|---------------------------|
| VCU #: 597 | UNIT #: 458 | QUARTER QUAD: C3NE | PHOTO YR/#: 1991/1090-126 |
| ACRES: 40.2 | VOL.: 1284.0 MBF | LOGGING SYSTEM: Highlead with 70' Tower, Shovel | |
| LANDSCAPE ZONE: Unit is within Big Beaver Watershed. | | | |
| Timber/Vegetation | Field Review: J. Miller/ J. Goering, 6/17/93 | Office Review: J. Goering | |
| Species composition predominantly hemlock and cedar with a few spruce present. Regeneration predominantly hemlock but includes some spruce and cedar in the west portion, mostly on nurse logs. Alaska yellow cedar decline evident - heaviest in the northwest corner of the unit with muskeg incursion. Low to moderate amounts of stem decay evident in cedar. Moderate to high amounts of mistletoe infection evident in canopy. Fairly dense understory vegetation. Many small seeps, streams, and poor soil drainage areas. Minimize soil compaction/displacement and avoid yarding through bog/muskeg areas. Drop northwest portion to exclude muskeg area and use full suspension skyline yarding if possible. | | | |
| Logging/Transportation | Field Review: J. Estabrook/ C. Giles/D. Goude, 6/19/93 | Office Review: K. Jehnke | |
| Unit is accessed by Road #71-82-36A. Recommend a 100 foot tower using highlead. Shovel log the NW corner. Partial cut is not recommended due to steep slopes. Good economics. | | | |
| Watershed/Fisheries | Field Review: R. Rogers, 6/16/93 | Office Review: A. Wolfson | |
| Directional fall north and south bounding streams. | | | |
| Soils/Geology | Field Review: R. Rogers, 6/16/93 | Office Review: A. Wolfson | |
| No concerns. No instability noted. | | | |
| Wildlife | Field Review: C. Confer, 6/16/93 | Office Review: M. Hall | |
| Level 1 structure retention. No other wildlife concerns. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit is not visible from any priority travel routes or use areas. Maximum Modification VQO. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Because of mistletoe infection recommend Type A clearcut. Directional fall north and south bounding streams. Shovel yard northwest corner. Mitigation measures for this unit are: F6, F8, and W5. | | | |

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

VCU : 597.2

UNIT : 459

QUAD : C3-NE



- Revised Control Lake Project Boundary
- Post-Field Unit Boundary w/ Setting Codes
- Other Post-Field Unit Boundaries
- USFS Timber Types for Volc 4-7
- Eagle Tree Buffer of 330ft
- Existing & Rebuilt Roads
- F.S. Roads Under Construction
- Post-Field Proposed Roads
- Ahmu-Class 1 & Stream Chantypes
- Ahmu-Class 2 & Stream Chantypes
- Ahmu-Class 3 & Stream Chantypes
- Channel Type Change

- Lakes and Ponds
- Second Growth Units
- MMI 4
- McGilvery > 41
- Landings
- Stream & Lake NoCUT Buffers

May 17, 1994

.5 MILE

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

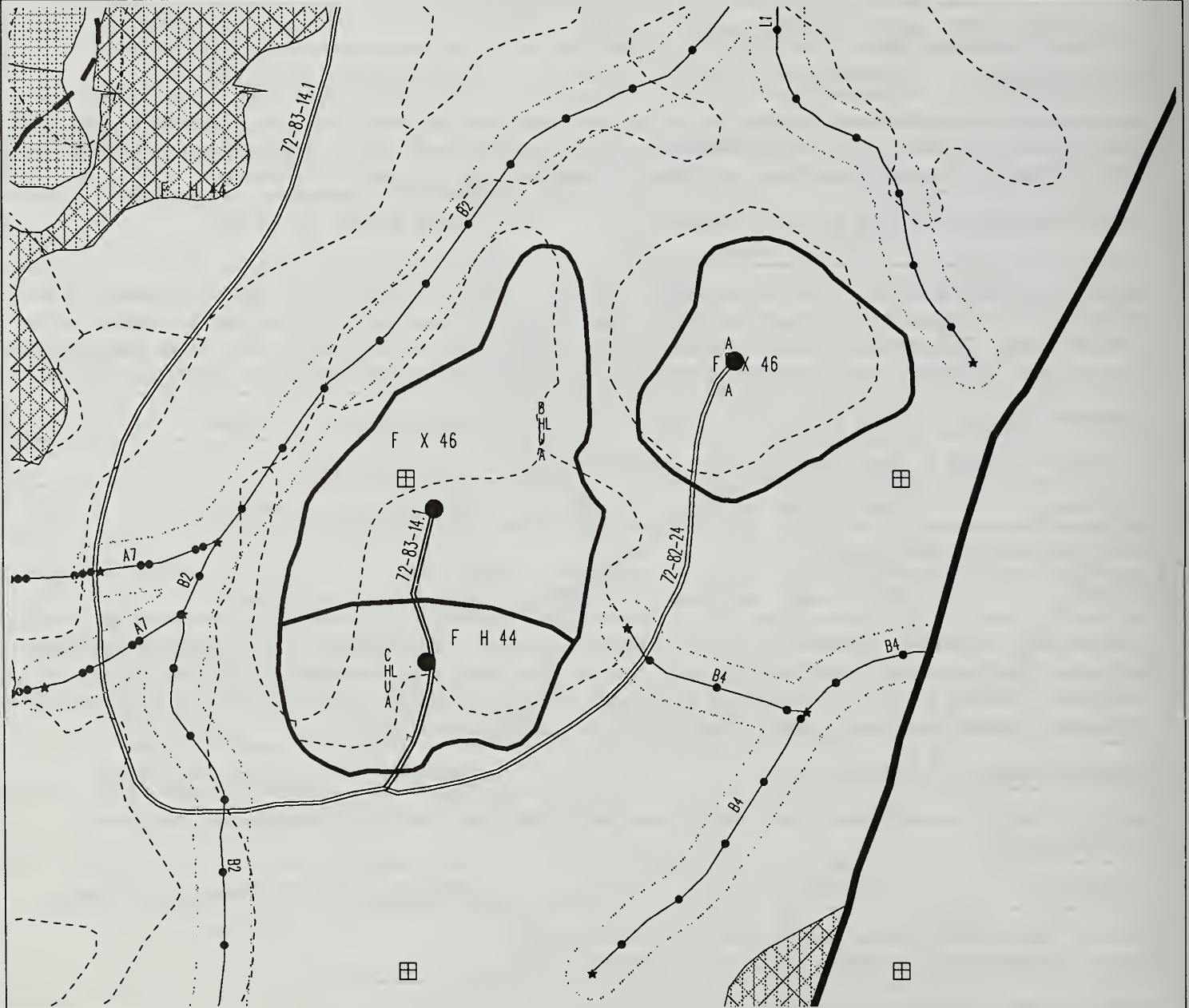
| | | | |
|--|---|--|---------------------------|
| VCU #: 597 | UNIT #: 459 | QUARTER QUAD: C3NE | PHOTO YR/#: 1991/1090-126 |
| ACRES: 58.1 | VOL.: 1467.1 MBF | LOGGING SYSTEM: Highlead 100' Tower, Swingyarder/Running Skyline, Shovel | |
| LANDSCAPE ZONE: Unit is within Rio Beaver Watershed. | | | |
| Timber/Vegetation | Field Review: T. Stecher, 6/17/93 | Office Review: J. Goering | |
| Species composition predominantly hemlock but includes cedar and some lodgepole. Predominantly hemlock regeneration. Lacking cedar regeneration. Fairly dense understory vegetation including salal. Low to moderate amounts of root decay evident in hemlock. Promote spruce/cedar regeneration through planting. | | | |
| Logging/Transportation | Field Review: J. Estabrook/ C. Giles/D. Graves | Office Review: E. Urstadt | |
| The unit is accessed by Rd #71-82-25-.2B and 25.2C. Both roads will be easy construction. The north landing can use a swingyarder. The north and west corners can be shovel logged. A 100' tower with a highlead system is needed for the southeast setting. The northeast boundary may need a mobile tailspur. Stream 2 in middle of unit will be split yarded and directional fell. Blowdown is not a problem. Partial cut is possible, but not recommended. The economics are good. | | | |
| Watershed/Fisheries | Field Review: B. Romey, 7/11/93 | Office Review: A. Wolfson | |
| 100' buffer on Stream 1. Split yard or full suspension on Stream 2 - fall away from stream. | | | |
| Soils/Geology | Field Review: B. Romey, 7/11/93 | Office Review: A. Wolfson | |
| Unit is fairly flat (no soils concerns). | | | |
| Wildlife | Field Review: M. Minnillo, 7/11/93 | Office Review: M. Hall | |
| Light deer/bear use in unit. Woodpeckers audible. Plucking post (junco) observed along Class I stream on south side of unit (across Rio River, along Unit #597-416), raptor unknown, most likely a sharp-shinned as-plucked bird; looked like a small junco. Southern portion of unit surveyed for goshawk with no observations. Snag retention Level 1. Stream buffer will maintain corridor along stream which is heavily traveled. Light deer/bear use in unit. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit is not visible from any priority travel routes or use areas. Seen from Road 30 in Middleground. Maximum Modification VQO. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| Minimum 100' buffer on Class I stream to southeast of unit. Split yard and directional felling of trees away from the stream in center of unit. Because of poor site quality and competing understory, recommend Type A clearcut. Mitigation measures for this unit are: F5, F6, F8, F10, and W5. | | | |

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

VCU : 597.2

UNIT : 460

QUAD : C2-SW



- Revised Control Lake Project Boundary
- Post-Field Unit Boundary w/ Setting Codes
- Other Post-Field Unit Boundaries
- USFS Timber Types for Volc 4-7
- Eagle Tree Buffer of 330ft
- Existing & Rebuilt Roads
- F.S. Roads Under Construction
- Post-Field Proposed Roads
- Ahmu-Class 1 & Stream Chantypes
- Ahmu-Class 2 & Stream Chantypes
- Ahmu-Class 3 & Stream Chantypes
- Channel Type Change

- Lakes and Ponds
- Second Growth Units
- MMI 4
- McGilvery > 41
- Landings
- Stream & Lake NoCUT Buffers

June 09, 1994

.5 MILE

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

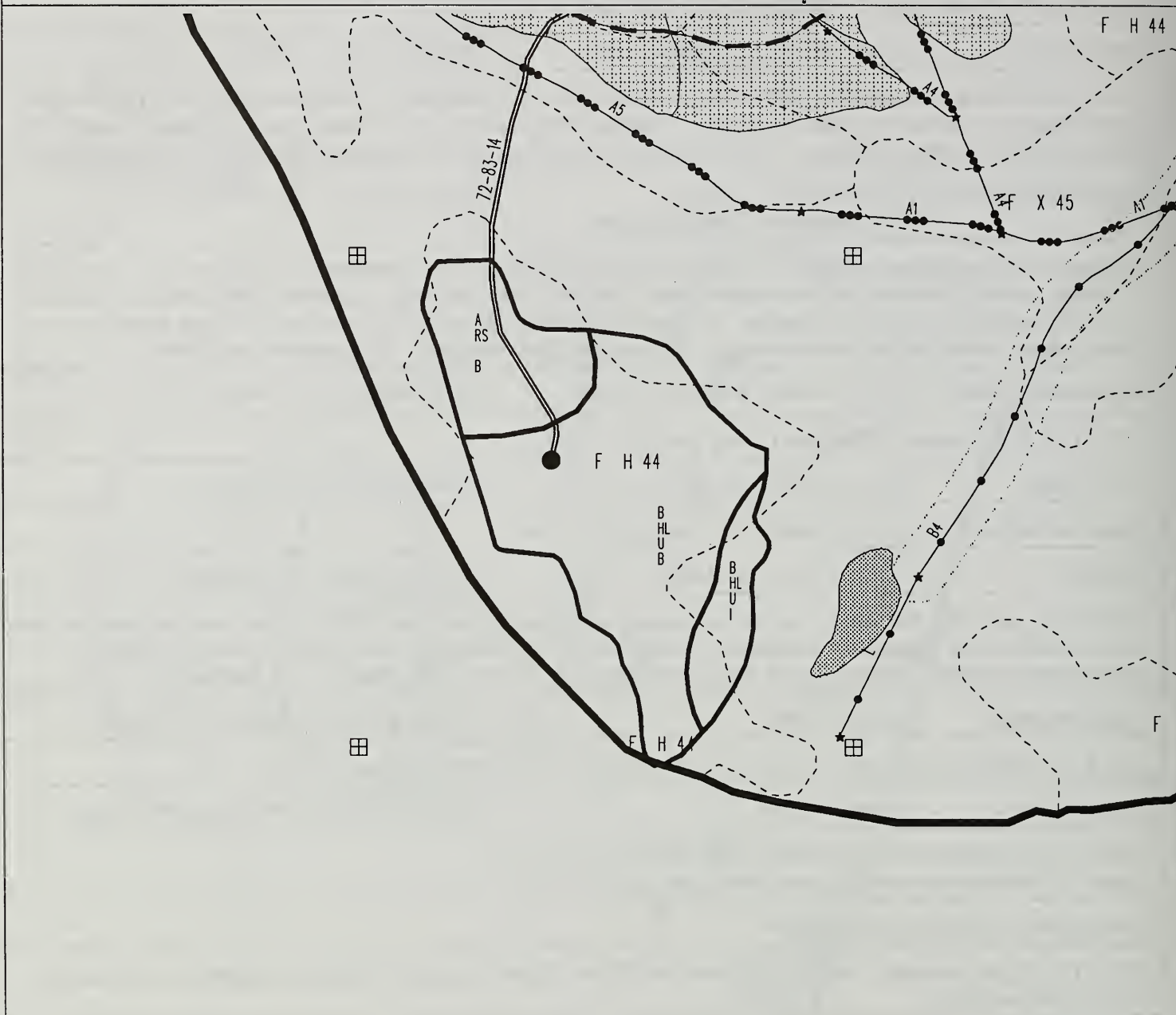
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|---|--|---|--------------------------|
| VCU #: 597 | UNIT #: 460 | QUARTER QUAD: C2NW | PHOTO YR/#: 1991/1090-74 |
| ACRES: 60.1 | VOL.: 3264.9 MBF | LOGGING SYSTEM: Highlead, Swingyarder/Running Skyline | |
| LANDSCAPE ZONE: Unit is within Rio Beaver Watershed. | | | |
| Timber/Vegetation | Field Review: B. Hasebe, 7/9/93 | Office Review: J. Goering | |
| Species composition predominantly hemlock but includes some spruce and cedar. Predominantly hemlock regeneration. Sparse spruce and western red cedar regeneration. Alaska yellow cedar decline evident. Low to moderate amounts of mistletoe infection evident in canopy. Consider shelterwood/seedtree harvest to promote spruce and cedar regeneration. | | | |
| Logging/Transportation | Field Review: J. Doyal/ J. Herzberg/T. Hoshall, 8/25/93 | Office Review: M. Whitty | |
| Highlead or running skyline utilizing a 70' tower on western (70%) unit and a swingyarder on eastern unit. The unit is divided by muskeg. Tailtrees are poor because most of the unit borders muskeg. A partial cut will require a helicopter due to poor tailholds. 100% uphill logging. A Class I stream west of the unit is more than 100' from the unit due to muskeg areas between the unit and the stream. This unit has good economics. No suspension requirement. | | | |
| Watershed/Fisheries | Field Review: B. Romey, 7/08/93 | Office Review: A. Wolfson | |
| 100' TTRA buffer required on Stream 1 along west side of unit. | | | |
| Soils/Geology | Field Review: M. Minnillo, 7/08/93 | Office Review: A. Wolfson | |
| Slopes are moderate. No signs of instability. Generally a dry site. | | | |
| Wildlife | Field Review: M. Minnillo, 7/08/93 | Office Review: R. Fairbanks | |
| Several deer, including two bucks, observed in muskegs around and in the center of unit. Dense thermal cover site, high forage in neighboring vegetation. Recommend leaving trees along muskeg in center of unit to maintain integrity of muskegs/scrub corridor. Maintain Level 2 structure vegetation. Surveyed for goshawks - no detections. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit is not visible from any priority travel routes or use areas. Maximum Modification VQO. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Eands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| 100' TTRA buffer required on stream along west side of unit. Type A clearcut. Mitigation measures for this unit are: F5, F8, F10, and W5. | | | |

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

VCU : 597.2

UNIT : 461

QUAD : C2-SW



- Revised Control Lake Project Boundary
- Post-Field Unit Boundary w/ Setting Codes
- Other Post-Field Unit Boundaries
- USFS Timber Types for Volc 4-7
- Eagle Tree Buffer of 330ft
- Existing & Rebuilt Roads
- F.S. Roads Under Construction
- Post-Field Proposed Roads
- Ahmu-Class 1 & Stream Chantypes
- Ahmu-Class 2 & Stream Chantypes
- Ahmu-Class 3 & Stream Chantypes
- Channel Type Change

- Lakes and Ponds
- Second Growth Units
- MMI 4
- McGilvery > 41
- Landings
- Stream & Lake NoCUT Buffers

May 23, 1994

0.5 MILE

CONTROL LAKE PROJECT HARVEST UNIT DESIGN CARD

| | | | |
|--|------------------------------------|--|-------------------------|
| VCU #: 597 | UNIT #: 461 | QUARTER QUAD: C2SW | PHOTO YR/#: 1991/690-28 |
| ACRES: 34.3 | VOL.: 865.6 MBF | LOGGING SYSTEM: Highlead/Swingyarder/Running Skyline | |
| LANDSCAPE ZONE: Unit is in Goose Creek Watershed. | | | |
| Timber/Vegetation | Field Review: G. Hedin, 7/7/93 | Office Review: J. Goering | |
| Species composition predominantly cedar with hemlock Little spruce is present. Regeneration predominantly hemlock with a few spruce but is lacking cedar. Some thin soils. Promote spruce/cedar regeneration through planting. | | | |
| Logging/Transportation | Field Review: E. Urstadt/J. Graves | Office Review: E. Urstadt | |
| This unit is accessed by Spur #72-82-14. The 2500' road has 94% easy and 6% medium construction. The south landing will use a 70' tower with shotgun or highlead system (70%). A swingyarder can harvest the rest (30%). Partial suspension can be achieved. Partial cut is possible. If unit is shotgun logged, tiebacks will be needed for tailholds. Blowdown is not a problem. The economics are fair. | | | |
| Watershed/Fisheries | Field Review: B. Romey, 7/07/93 | Office Review: T. Stewart | |
| No streams either near or in unit. | | | |
| Soils/Geology | Field Review: M. Minnillo, 7/07/93 | Office Review: T. Stewart | |
| Moderate slopes, dry site, no concerns. | | | |
| Wildlife | Field Review: M. Minnillo, 7/07/93 | Office Review: M. Hall | |
| Small lake east of unit. Maintain Level 2 structure retention due to unit affecting small patch within naturally fragmented matrix. Recommend leaving trees along muskeg in center of unit to maintain integrity of muskegs/scrub corridor. | | | |
| Visual/Recreation | Field Review: | Office Review: S. Bedross, M. Greenig | |
| Unit not seen from any priority travel route or use area. | | | |
| Cultural/Lands | Field Review: | Office Review: T.W. Greiser, M. Greenig | |
| Cultural - Unit outside of high probability areas for cultural resources. Lands - No state/private or encumbered lands occur adjacent to unit. | | | |
| Interdisciplinary Team Recommendations | | | |
| No streams or buffers in unit. Western unit boundary lowered to exclude non - CFL. Type B clearcut recommended to maintain Level 2 structure. Mitigation measures for this unit are: F5, F8, W4, and W11. | | | |



